

**Revised Edition**

**A Patient Revolution  
Against Decades of  
Inferior Thyroid Treatment**

# **STOP the Thyroid Madness**



**Janie A. Bowthorpe, M.Ed.**

**FINALLY, A GUTSY AND REVOLUTIONARY  
PATIENT-TO-PATIENT BOOK AGAINST DECADES  
OF A WORLDWIDE MEDICAL SCANDAL  
INVOLVING HYPOTHYROID DIAGNOSIS,  
TREATMENT, MEDICATIONS, AND ADRENAL FATIGUE!**

**YOU WILL LEARN THAT:**

**The TSH lab test is a failure for diagnosis and treatment.**

**Patients report many lingering hypothyroid symptoms while on T4-only medications like Synthroid and Eltroxin.**

**A far better treatment has been there all along and to which patients are returning.**

**A large percentage of patients have adrenal dysfunction, low ferritin/low iron, excess Reverse T3, low B12 or Vitamin D, or more imbalances which need treatment.**

**A patient revolution has produced far better treatment strategies that work.**

**"After 15 years of being misdiagnosed, this book saved my life! Finally an answer to why I felt so bad for so long, and now I'm on the road to recovery" ~Kymm, thyroid and adrenal patient**

**"This book really is the bible of better thyroid treatment. I refer to it constantly and what I know now has changed my life. Thank you Janie!" ~Charlene, thyroid patient**

**JANIE A. BOWTHORPE, M.ED. became a thyroid patient activist in 2002 after a complete turnaround with the use of desiccated thyroid and correcting other issues that plagued her after T4-only use. As a messenger of what patients worldwide have learned about successful treatment, she is adamant that patients become informed so they can begin the process of change in their own doctors offices.**



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**HEALTH AND FITNESS**

*Stop the Thyroid Madness*



# *Stop the Thyroid Madness*

**A Patient Revolution Against  
Decades of Inferior Thyroid Treatment  
Second Edition**

**JANIE A. BOWTHORPE, M.ED.**



Laughing Grape Publishing, LLC



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**Every effort has been made to make this book as complete and accurate as possible. However, there may be mistakes, both typographical and in content. Therefore, this book should only be used as a guide, not as the ultimate source of information on thyroid, adrenal and related health issues. Furthermore, this book contains information that is current only up to the printing date.**

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*Thanks to the many, many thyroid patients around the world  
who have e-mailed and thanked me for the Stop the Thyroid  
Madness revolution. You inspired me, in turn.*





Dedicated to “Miserable Mom”—the handle of a gal who posted on a health web site, got a lousy answer from the doctor which only kept her sick, and who was the final impetus for me to start the Stop the Thyroid Madness Revolution with sweet revenge. I hope you find this book.



## ACKNOWLEDGEMENTS (FROM THE FIRST EDITION)

Not one inch of this book would have been possible without the throngs of thyroid patients worldwide who have gathered on internet groups, asked their questions, demanded change from their doctors, taken chances with their treatment, and shared it all so we can learn from each other. I was one of those patients, and I've worked with and been blessed by countless others.

The internet has been a godsend for thyroid patients to find out that we were never alone in our compromised lives. In fact, we were both amazed and angered by our similar physical and emotional symptoms of more than a five-decade thyroid treatment scandal. The internet has also given us a place to research, study, and implement change in thyroid treatment while we sat in our own homes. God bless the World Wide Web and all patients who have come to it.

Out of this newly-hatched patient revolution has risen many spectacular thyroid patients. The following are those I have worked with most closely. In a completely random order (since they are all incredible), they are: Kerry Bergus, a thyroid patient who shined in her knowledge about children's issues with thyroid problems; Phil Georgian, a thyroid/adrenal and hypopituitary patient who specializes in Men's issues and has a knack for details; Missy Hartman, a thyroid/adrenal patient advocate who took the time to specialize in low ferritin, iron, and B12; and Perry Ross, a thyroid/adrenal patient with an interest in men's issues and whose wit, wisdom and creativity has kept us all laughing.

There is Joyce Bickford, a thyroid/adrenal patient who shares her important experience and knowledge with other RAI (radioactive iodine treatment for hyperthyroid) patients; Bob Harvey, a thyroid/adrenal/hypopituitary patient who has given so much of his time specializing in men's issues, including low testosterone; Lisa, a thyroid patient who learned the ropes about thyroid disease and mental health issues with her friendly personality; Stephanie Buist, a thyroid cancer/adrenal patient and doctoral student in Naturopathy who is a top patient expert on iodine use; and Lynda, our UK thyroid patient advocate who took the helm of the Natural Thyroid Hormones group to keep everyone in line, as well as Linda and Tracy.

Pats on the back go to Deborah, who took on the Real Thyroid Help forums and who is brilliantly assisted by her crew of volunteer patient forum leaders. It's another splendid example of patients giving feedback to other patients so they can approach their doctors wisely, intelligently and with courage.

Friendship, great laughs, and shared wisdom abounds when you have friends and hypothyroid comrades such as Sandy, Kirsty, Helen Trimble, Kiki, and Betty.

I am extremely indebted to the creativity of Chantell Griffin-Boudreau of Canada for her extremely talented graphic designing skills for the cover of this book; Kerry Bergus, whose editing skills gave more refinement to the transcript; Valerie for her recommendations in the T3 and adrenal chapters, plus Perry's early comments on the adrenal sections.

And no thyroid patient would be where they are today without the wisdom of doctors like David Derry, MD; Barry Durrant Peatfield, LRCP MRCS, John Dommissie, MD; Joseph Mercola, DO; Bruce Rind, MD; Michael Lam, MD; Gina Honeyman DC; and John C. Lowe, DC. Books which have inspired us beyond words have included *The Great Thyroid Scandal and How to Survive It* by Dr. Barry Durrant Peatfield, and *Safe Uses of Cortisol* by Dr. William McK Jeffries. And last but not least, the book which was the catalyst for it all by Dr. Broda Barnes: *Hypothyroidism: The Unsuspected Illness*.

Finally and just as importantly, thanks to my husband for preparing many meals, never complaining when his wife spent innumerable hours on the computer (probably because it allowed him to watch poker, boxing and hunting shows on TV), and having patience with my slew of expletives when I got frustrated; to my sons Aren, Micah and Leigh for their assistance with software or techniques when I was about to bang my head against the wall; and to my cat Hershey for continually trying to sit in my lap when I did not want him there.



## ACKNOWLEDGEMENTS FOR THE SECOND EDITION

Good things haven't changed.

The exact same impetus that helped create the First Edition has been the same for additional information in the Second. Namely, we are still learning! And I can only give immense credit to patients who have continued to share their discoveries for better treatment from one patient group or forum to another, as well as through e-mails and phone calls. We all know this is an "us" thing, working to create a good shared body of treatment information and discoveries.

And, as my role as a messenger of all this shared information, I could praise many more individuals this time around! I am thankful for those who have openly shared additional discoveries, who have supported me in this effort to represent patient experience, who have been very good acquaintances, friends and colleagues, who have been excellent within patient groups in helping other patients, who have said so many kind and helpful comments to me on Facebook groups, in private e-mails, within the patient groups and forums. The list would be so long, and I'd fear I'd leave someone out.

So I'm just going to say to all of you: *Thank you.*

Thank you for who you are, how you've contributed to this patient movement of information, besides all you've meant to me personally. Some know it right out; others may never guess I was thinking of them here. But I am.





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## PREFACE

Disgust can have sweet effects. It was around Summer of 2005, and I had been observing a large health web site for a few months. On the thyroid forum, I was seeing certain posters disappear, one by one, to post no more. Why? I could see the trend. If they dared to mention desiccated thyroid to someone else rather than the Synthroid praised by the doctor; if they dared to disagree with the doctor that the TSH is a good treatment guide; if they dared to say that the free T3 may be a better lab, they were being kicked off. It was disgusting.

It's also where I first saw the words of a gal who called herself Miserable Mom. She described a slew of miserable symptoms, only to be told by the well-meaning but seemingly uninformed doctor that her two grains of Armour were adequate and from a thyroid standpoint, there wasn't more to do. I was appalled. She was clearly under-dosed, had been miserable for ten years, and was going to stay so based on that forum advice.

And that very day, out of my anger and disgust, is when the Stop the Thyroid Madness ball started to roll in my mind. If doctors were going to continue to be as brainless as a block of wood—leaving patients sick, confused and tired—a different direction had to be taken: patients educating patients, and that information to be taken assertively and confidently into the doctor's office.

This book is not my opinion, my observation, my direction. Its compilation represents the opinion, observation and

direction of hundreds of thousands of patients who have struggled together to find answers via numerous internet groups and forums. I am simply the messenger who named the revolution and compiled the brilliance of what thyroid patients have learned.

I would say that nothing in this book is perfectly on target. But most is extremely close, some is mostly close to the target, and the rest will evolve as this revolution continues.

And the hope of this book? That you will become enlightened and empowered by the hard-earned knowledge and success given in these pages, and carry that information into your doctor's office, demanding a far better treatment protocol as well as respect for your own knowledge and inner wisdom. And if you don't get it from one doctor, you will move on... and move on again until you do. We, as patients, will change the blundering thyroid treatment medical monster from the bottom up with our knowledge, our persistence, and our pocketbooks.

## PREFACE TO THE SECOND EDITION

It didn't take long. Quickly after the first edition of *Stop the Thyroid Madness* was published, patients were continuing to gain important information and sharing it online with each other.

For example, it was discovered that some patients can have an optimal ferritin result, yet lab results in a full iron panel reveal a problem, such as low serum iron or saturation, high TIBC, etc. Turns out that ferritin can rise in the presence of inflammation in some individuals. Thus, it's wise to make sure your doctor does a full iron panel with ferritin. See Chapter 13.

Throughout the book, I will be using the umbrella term "adrenal dysfunction" to describe either the mix of highs and lows, or all lows. For all lows, "adrenal fatigue" seems the best description.

With adrenal dysfunction, we discovered a likely cause: poor levels of T3 when the adrenals need T3 the most—in the early morning hours before one wakes up. Thus, the T3 Circadian Method for adrenals is explained in Chapter 6. For those who can't benefit from the protocol and saliva proves a need for HC, it can be wiser to start on 20 - 30 mgs HC, rather than raise to it, to prevent uncomfortable adrenaline surges.

We found out that after the reformulation of Armour, patients did better if they chewed it up, as if the excess cellulose needed to be broken down for better absorption of the desiccated thyroid within. That may be true for any tableted desiccated thyroid if it can't be done sublingually.

This edition contains better information in figuring out one's Free T3/RT3 ratio, which is important to know since so many with adrenal dysfunction or low ferritin/iron make too much RT3.

There is also updated information on the various desiccated

thyroid brands, T3 brands, and hydrocortisone.

You will also find more in the Odds and Ends Chapter, as well as the additions on Hypopituitary and Thyroid Cancer in that chapter.

You'll now find a Chapter 15 with information on the importance of good foods and supplements which thyroid and adrenal patients report as being important in their renewed health and why.

At the end of each chapter, you will find little nuggets of gold which either underscores information, or presents new information.

The addendums have added information, such as how to interpret your lab results, how to prepare for lab work, plus conversion pathways.

Actually, updated information has been added to nearly *every single chapter and addendum*. Working on the second edition was just about as much work as creating the first. Is it a perfect book? No. But as stated before, it's based on patient experience where some information is a bulls-eye, other information is close, and the rest will continue to develop.

And as was true for the first edition, this patient-to-patient book is meant to educate and inspire you in order to enter your doctor's office informed and confident in your relationship with the doctor. Work to find an informed or open-minded doctor to use this information with, especially one who values your own wisdom and education.

# INTRODUCTION

*If a thousand old beliefs were ruined on our march to truth,  
we must still march on.*

~ Stopford Brooke

## *My Story*

It wasn't more than several years ago that I was sitting on the front cedar deck of my home gazing at the red hue of the late afternoon clouds...and crying. Granted, I was in a happy marriage with a tall cowboy, and I was awed by the views of mountains and valleys from my front and back decks. When you have lived in the flatlands of Texas for most of your life, nothing beat what I could see from my house now.

But, my ability to physically live my life was going down the tubes.

Sure, the previous 20 years had been difficult enough, even with nearly 20 of those years on Synthroid and later Levoxyl. But I had managed and made the best of it, even if frustrated, limited, and often miserable.

Now, I was seeing an even more debilitating decline for two years. I couldn't be on my feet for more than 30 minutes without extreme tiredness setting in and the soles of my feet hurting as if I was standing on glass shards. If my husband and I attended any event that involved standing, I was now forced to bring a small moveable stool to sit on.

Even worse, if I dared go beyond my already-limited energy range, I would move into the same bizarre and debilitating physical overreaction I had been living with for



two decades. Just the day before, while sitting and after I had used sandpaper to smooth the edges of a small wood project, I ended up no less exhausted than a marathon runner. My heart pounded violently in my chest. The fatigue was nauseating. I had terrible insomnia that night. And I was disabled the next day.

When my husband came out and sat by me on that deck, I had to look straight into his eyes with tears in my own and say *"I need your help to apply for Social Security Disability."* I also knew I would become dependent on my husband to even grocery shop. It was a low, low moment.

## **How it all began**

It was 1979. I was pregnant with my second child. And around the 8th month, I began having very strange mental aberrations. I would wake up feeling strangely disconnected from my body, as if my thoughts were far, far away and difficult to express. It was frightening, but it ceased when I gave birth.

But after that birth, I was to begin nine months of hell while nursing my son. I had multiple illnesses that included a minimum of four colds (just as one ended, a new one would begin), a bronchial infection, a flu-like illness and finally viral pneumonia. And two-and-a-half years later, I had a similar scenario while nursing my third son, namely, a succession of viral illnesses followed by bacterial pneumonia and the worst flu I'd ever had months after that.

Finally, the illnesses stopped, but a new frustrating saga was to begin. I was unable to hold my babies or toddlers for more than a few minutes. My arms would feel like dead weights with extreme weakness. I had to continually pass my young children over to my husband.

By the time I was 29 years old and had three healthy young sons, I concluded that my easy arm fatigue and poor stamina was due to being out of shape. I then decided to begin a career as a fitness instructor, receiving top notch certifications from the Aerobic Institute in Dallas. I started my own fitness business in the basement of a church when I was 30 years old, teaching five one-hour classes weekly.

But something quite bizarre was going on after each and every class. Instead of recovering from the workout, my heart rate would stay high, and by 8-9 pm each evening, I would be a basket case of debilitating and profound fatigue. When I went to bed for the evening, my heart would pound in my chest as if I had an internal hammer. I was as weak as if someone took a drinking straw to my body and sucked out all the energy. My fatigue would be so pronounced that I felt nauseous. I would have insomnia for hours, and I would sweat like a pig. The next morning, I felt no better than if I had been run over by an 18-wheeler and smashed against a concrete wall.

Thinking this strange reaction would pass, I prevailed, building my business and creating a fitness newsletter for my clients. But it didn't go away. And I was yawning through any school event I attended for my sons, and suffering.

I made an appointment with our doctor, and via a TSH lab test, he pronounced me "borderline hypothyroid" with a result of 5.2. I was placed on Synthroid and raised to 100 mcg. When my TSH came down into the 2's, which was within the so-called "normal" range, I was pronounced adequately treated and would have no more problems! Needless to say, I was thrilled. I loved my new fitness profession and looked forward to building a strong business.

Wrong.

After 2 years of teaching fitness classes, I was forced to give up my beloved career due to my body's continuing bizarre and extremely debilitating reaction to each and every class. I was just plain exhausted to the bone and it was compromising my abilities as a mom, as well.

## **Nearly two decades of problems**

And for the next 17 years, while "adequately treated" on Synthroid and later Levoxyl with a "target TSH", I was to go through more periodic hell.

- I was unable to spend time shopping or distance walking with friends due to my lack of stamina.

- I was limited in my abilities on vacations with my family due to my poor stamina and highly extreme reactions to exercise or the sun.
- I was unable to play volleyball on a local neighborhood team due to paralyzing weakness in my arms just 15 minutes into the game.
- I had to choose jobs carefully to avoid long-term standing and movement.
- I had to deal with chronic low-grade depression, even though I was “adequately treated”.
- I had to take frequent naps to get by.
- If I tried to do any activity away from home, I was forced to take a day and more off to ‘recover’ from the debilitating results.

I remember being on vacation with my family, walking across a large field to view old archeological mounds. It was a beautiful and hot sunny day, and the terrain was flat. When we returned to the car an hour later, and resumed our driving, my debilitating fatigue and overreaction became so profound that I told my husband I needed to be taken to a hospital. I outright felt like death warmed over and couldn’t keep my eyes open. We kept driving to our next motel, though, and I collapsed in bed.

I spent thousands upon thousands of dollars trying to find out what was wrong over those years, and amassed a thick stack of paperwork and lab work, to no avail. And, I was always “adequately treated”.

## **Tests, treatments and too many diagnoses**

During these 17 years, I drove thousands of miles, saw a broad slew of doctors and was tested and experimented on for every condition imaginable:

- I did tests for hypoglycemia;
- I was a guinea pig for a doctor’s hormonal treatment;
- I had a painful muscle biopsy;
- I did the adrenal ACTH Stim test;
- I tried homeopathic remedies;
- I had blood drawn for every imaginable hormone problem;
- I did a treadmill test;
- I took beta blockers;
- I wore a heart monitor;
- I did bizarre and painful neurological tests.

I was told I was depressed. I was told I had Chronic Fatigue Syndrome (CFID'S). I was told I had an unusual "energy metabolism disorder." I was tested for Glycogen Storage Disease. I was told I have a serious but unknown "mitochondria disorder"—a prognosis which would only get worse. And on my own. I saw similarities in my symptoms to Dysautonomia, an overreaction of the autonomic nervous system, and named my condition "post-exercise dysautonomia." But never, ever was there any conclusive diagnosis as to what I had, and 'it was never my thyroid'.

When my hair became thinner and thinner, I was simply told I had alopecia, and there wasn't much they could do. And like millions of silent patients around, I became a member of the Yaya Hypohood Psychiatrists Club (see Chapter 10)—falling for the premise that I **MUST** have a psychological problem causing all this. What a bunch of hogwash. It was a waste of my money.

## **The facade of looking normal**

And the most remarkable aspect of all the above: I doubt *anyone* who has known me would say I appeared to be anything less than normal. Namely, though all the above occurred just as you read it, I still raised three children, had my own jewelry line, kept up large houses, made each Christmas special, each birthday memorable, got a Master's Degree, led many continuing education self-help college classes, taught in public school a few years, participated in archaeological digs, and kept exercising by walking. But I paid horrific and nauseating prices often and privately, and I adapted my life all over the place just to be able to do some of the above. Many of us are just like this when on a thyroxine T4-only medication like Synthroid, Levoxyl or any of numerous levothyroxine brands around world, including Oroxine, Eltroxin and others.

By 2002, my physical fatigue and bodily overreactions became so pronounced that I found myself sitting on that front deck with the beautiful sunset, asking my husband to help me apply for Social Security Disability. It had been a long road, looking healthy and normal in the eyes of friends and acquaintances around me. I have no doubt that anyone

who knew me back then would be quite surprised what I was going through. But I was living miserably, typical of an invisible illness. And for all I knew, I now had one foot in the grave.

## **The beginning of change**

But, 2002 was going to be a new beginning. Because I could do nothing else, I became obsessed with research and my computer was smoking. I always think of the five steps of grief as identified by Elizabeth Kübler-Ross: Denial, Anger, Bargaining, Depression, and Acceptance. To my favor, I had never stayed in the "Acceptance" phase very long. I kept denying that I was headed for disability.

And though it took a few months, I found patients in a small Yahoo group mentioning a prescription medication called natural desiccated thyroid, their problems with thyroxine-only treatment, and the fallacy of the TSH lab. Whoa! I was like the cartoon character with springs behind my eyes. I found a possible answer! What I was reading seemed to imply that desiccated thyroid, which at that time was the popular brand name of Armour, was changing their lives.

And I proved it. I found a Nurse Practitioner over an hour away from me who would help me switch to Armour in July of 2002. Unfortunately, she left me on my starting dose of  $\frac{3}{4}$  grain for nine weeks, which caused a return of my hypo- symptoms. I then moved to another NP who had more understanding of raising your dose. And no kidding... my life began to change 180 degrees!

I first noticed that no longer was I having that bizarre and highly debilitating physical reaction to activity. Gone! Kaput! I had to pinch myself. Was this real? Would it creep back up on me when I wasn't looking? Nope, it didn't. And considering how disabling those reactions to anything physical had been for so long, this in itself was a huge miracle.

As I increased the desiccated thyroid, paying far more attention to symptom elimination rather than simply lab ranges, I saw my hair and skin soften. I now had soft and strokable hair rather than a brillo pad. I also now had a healthy oiliness at my roots rather than a week of dry hair before I had to wash it.

Next, I saw an abatement of my chronic low-grade depression. I regained an inner smile which I hadn't felt for years and years. Then I saw my constipation change, my weak arms and legs become strong, and my painful feet disappear. For the first time in years and years, I could stand for hours and survive!!

And now I could have an active day and NOT have to lie on the couch in front of the 5:30 pm news and fall into a snoozing la-la land. I could come home from an active day and do housework! (A dubious joy but still glad.)

Some improvements took longer than others, such as the return of my once-thick hair, but improve they did! And best of all, I regained my energy and stamina.

By 2003, I was a different person and I loved it. I could stand for long periods of time without an issue. I could exercise without an issue. I could buy groceries without an issue. I could LIVE...without an issue.

Was it and has it been a smooth transition to better health and renewed energy? Nope. When I had regained most of the above, I had to figure out that I had low ferritin, *aka low storage iron*, which in turn caused me to slide into iron anemia twice with miserable symptoms similar to the worst hypothyroid. So I had to correct it twice. I had to give myself far better supplements to meet the new energy demands of my body. I had to correct female hormonal issues possibly brought on by the long years of staying hypothyroid. I had to deal with highly stressed adrenals. I also found myself with low potassium and low magnesium which needed correction. But I got through those boulders on the thyroid yellow brick road.

Until you've been at the bottom of your particular pit, and climbed out, you'll never know what it's like to be human again... to be able to spend hours doing what you love, to hike to places you only wished you could see, to be outside and enjoy the memory, to run a business, to participate in group physical activities, and to just plain LIVE. I can now sit on any deck, glancing at the beauty all around me, and then walk down the steps and do whatever I want to do without horrendous consequences!

## Common experiences we all share

There are unique and individual facets of my story. Some you might identify with; others you might not. But there are still common factors in my story shared by most any hypothyroid patient around the world. They are:

1. Millions of us on a T4-only treatment are not adequately treated, and it gets worse as we age
2. Most all of us have, or have had, lab-obsessed doctors who are not paying attention to our clinical presentations of that failure
3. When we do bring light to those symptoms, we are bandaided with medications to cover them up, or told to see a Psychiatrist/Psychologist
4. We are all being held hostage to the lousy TSH lab and range, and
5. We are all left with symptoms of some kind and of some degree as a result of a substandard treatment, and which can lead to the misery of adrenal dysfunction as well as other conditions, such as low ferritin or iron, low B12 or Vitamin D, low minerals, mental health issues and much more.

And on the other side of the coin, just like myself, a growing body of thyroid patients now have the common experience of switching to *a quality prescription natural desiccated thyroid product*, and feeling *FAR* better. A revolution for better treatment has arisen among patients who are standing up against decades of thyroid treatment which has been inferior, rigid and just plain stupid. I am raising the banner, and I hope you will join with me and the growing body of other thyroid patients around the world who are shouting:

**Stop the Thyroid Madness!**

# CHAPTER 1

## Thyroxine T4-Only Treatment Gets a Big Fat "F"

It's been matter-of-factly going on since the 1960's: a patient is finally given the diagnosis of *hypothyroid* by a doctor, and the prescribed medication is *synthetic levothyroxine sodium*, also simply called *l-thyroxine* or just plain *T4*. Brand names can include *Synthroid*, *Levoxyl*, *Levothroid*, *Eltroxin*, *Oroxine*, *Unithroid*, generic *Levothyroxine* and others.

We thought we were adequately and competently treated with our thyroid medications. Why? Because our doctors told us we were; because the TSH lab said we were; because doctors know what's right for us; because there were 'some' improvements. We've dutifully picked up our prescriptions at our local pharmacy and mindlessly popped our single pill each and every morning. We've felt secure in our treatment and maintained faith in our doctor.

*But it's all been blunderingly and scandalously wrong.*

### **How it has happened**

From the time they were first created in pill form, T4 medications have been thrust upon the worldwide market and hundreds of millions of googly-eyed and trusting hypothyroid patients like a bulldog. It's been used in studies and promoted



in medical journals. It's been underscored in pharmaceutical pow-wows and stamped with approval in continuing education conferences. Your friendly-suited pharmaceutical rep has carried it to innumerable doctors' offices with free samples and tasty incentives. Google any brand of T4 on the internet and you'll get a vast slew of results. Billions of dollars have been invested in its promotion, salability and information machine.

*And what a waste of time, money, and energy for patients.* In spite of some reported improvements, behind all pharmaceutical promotions are millions of thyroid patients who have been left under-treated or poorly treated with T4-only. It's a treatment which has diminished, to one awful degree or another, their quality of life as well as their health.

### **The failure of T4-only treatment in my own family**

Many years before I was born, when she was around 21 years old, my mother developed hyperthyroid before she became hypothyroid, aka Graves disease. A hyperthyroid condition refers to an over-active thyroid, causing it to produce an overabundance of thyroid hormones. She became as thin as a bean pole. And the recommended solution was surgery to remove most of her thyroid, leaving a very small portion. Years later, after she married and had two young children, her hyperthyroidism redeveloped complete with bulging eyes—a common symptom. (And as a young child, I thought my mother was turning into a large insect.) This time, they used radioactive iodine<sup>1</sup> treatment (RAI) to kill off the small remaining part of her thyroid to prevent further damage from the hyper state.

And sometime after the RAI, when sluggishness of hypothyroidism was starting to appear, she was put on levothyroxine sodium, also called l-thyroxine or simply T4... a “new and modern” hypothyroid treatment with the brand name of Synthroid. T4, the thyroid storage hormone, is the most abundant hormone produced by the thyroid. Its main function is to convert to the active and life-giving hormone T3. It was meant to be a story with a happy ending.

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1. 22 reasons not to have RAI: <http://atomicwomen.org/Top20Reasons.htm>

## **But it turned into a Levothyroxine nightmare**

As time progressed, she developed chronic and debilitating depression and became an invisible member of the YaYa Hypohood Psychiatrist Club (see Chapter 10). She spent countless hours in counseling, either with the professionals recommended by her doctor or with a qualified minister of her church.

By the time I was ten, her depression was so severe that she submitted herself to Electric Shock Therapy (EST), a seemingly barbaric procedure which was thought to alter the brain and improve depression. Never was a treatment more futile. Not only did it dull her sharp intelligence, she remained depressed and was put on antidepressants for the rest of her life.

Over the years while on T4, she gained weight and dieting produce few results. She had to nap daily. She required long hours to sleep. She never had the stamina of her friends. She couldn't stand on her feet long. She had to forgo certain activities. Her hair was forever dry. She developed high cholesterol later in life, and had to have a balloon procedure on her heart. Though she lived until she was 83, and had some memorable times, her life was always one of compensation and compromise. And though no one figured it out at the time, and my mother went to her grave without knowing... all the above were due to her inadequate T4-only treatment: her pill-treated depression, her weight gain, her poor stamina, her heart issues and high cholesterol, the compromises of her activities... all of it. It was to be a treatment which leaves millions of us hypothyroid to one degree or another.

## **Common to millions of those on a T4-only treatment**

The details and severity may be different, but the outcome is the same: a life that forever deals with the effect of inadequate thyroxine treatment. And almost as bad are the countless times we noticed a symptom here and there, complained to our doctor, only to be told it's something else, and here's another pill to relieve it.

"But I feel fine!" you may exclaim as you read this. And I believe you. But I also know three facts from my own experience and from communicating with or observing tens of thousands of T4-only thyroid patients over the years:

1. No matter how fine you feel, you can be living with symptoms related to an inadequate treatment.
2. Feeling fine is subjective, and thyroxine-treated thyroid patients lower their standards of what “fine” is.
3. The body was not meant to live on a storage hormone alone.

T4 is simply that—a *storage hormone*—tucked away into your cells for future use in its conversion to T3, just as you tuck away that jar of grandma’s jam in the pantry for another time. Yet a healthy thyroid makes not just the storage T4, but also direct T3, T2, T1 and calcitonin. In other words, there’s more in the house than just what’s in storage.

### **Lingering symptoms while on T4-only treatment**

When it was becoming clear that desiccated thyroid, with its combination of T4, T3, T2, T1 and calcitonin, was changing lives, I asked a large body of thyroid patients what symptoms they had while “optimally treated” on synthetic T4 medications like Synthroid, Extroxin, etc. The resulting list was staggering: The list is not only profound, but if you really think about the implications, it’s disgusting. It’s not only a long tally of symptoms experienced by patients while on thyroxine treatment, but nearly all of them are also untreated hypothyroid symptoms! In other words, the symptoms reveal that your levothyroxine T4-only treatment leaves you hypothyroid! Nevertheless, most all TSH-obsessed doctors proclaim you are “normal”!

A second ironic qualification was this: *to ONLY list symptoms they had while on a T4-only treatment which have now been highly improved or eradicated since being on desiccated thyroid*. Yes, these symptoms had all been lessened, improved or removed when these patients had switched to desiccated thyroid and dosed according to the elimination of symptoms first and foremost, rather than simply labs. We’ll cover desiccated thyroid in the next chapter.

***Lingering Symptoms While on T4-only Medications***

Less stamina than others  
 Less energy than others  
 Deep exhaustion  
 Long recovery period after activity  
 Bad reaction to exercise  
 Frequent napping  
 Inability to hold children for long  
 Arms feeling heavy after activity  
 Chronic low grade depression  
 Chronic severe depression  
 The need for anti-depressants  
 Suicidal thoughts  
 Often feeling cold  
 Cold hands, feet  
 High cholesterol  
 Being on Statins  
 Colitis  
 Irritable bowel syndrome  
 Constipation  
 Hard little round stools  
 Painful bladder  
 No or thinning eyebrows  
 Dry hair  
 Dry skin  
 Cracked heels  
 Ridged fingernails  
 Hair loss  
 White new hair growth  
 Hair breaks faster than it grows  
 Nodding off  
 Requires naps in the afternoon  
 Sleep Apnea  
 Air Hunger  
 Inability to concentrate  
 Forgetfulness, Foggy thinking  
 Easy weight gain  
 Inability to lose  
 Relationship problems  
 NO sex drive  
 Crabby, Moody  
 PMS  
 Heavy period  
 Failure to ovulate and/or constant bleeding  
 Problems getting pregnant  
 Swelling  
 Aching bones/muscles

Osteoporosis  
 Poor skin quality  
 Hives  
 Exhaustion in every dimension—  
     physical, mental, spiritual,  
     emotional  
 Slowing to a snail's pace  
 Illegible handwriting  
 Internal itching of ears  
 Weak fingernails  
 Anxiety  
 Ringing in ears  
 Inability to eat in the mornings  
 Joint pain  
 Carpal tunnel symptoms  
 No appetite  
 Heart Fluid retention  
 Heart Palpitations  
 Swollen legs that prevented  
     walking  
 Blood Pressure problems  
 Rising cholesterol levels  
 Varicose Veins  
 Inner Ear problems  
 Low body temperature  
 Tightness in throat; sore throat  
 Swollen lymph glands  
 Overreaction to cold medica-  
     tions  
 Allergies (which may also be  
     related to adrenal fatigue)  
 A cold rear end  
 Irritable bowel syndrome  
 Painful bladder  
 Dysphagiam Nerve Damage  
     inability to swallow fluids/  
     food  
 Pneumonia  
 Easy sicknesses  
 Poor iron levels, Poor Cortisol  
     levels, Digestive problems  
 Worsening PTSD (post trau-  
     matic stress disorder)  
 Inability to work full time  
 Overactive Autonomic Nervous  
     System (Dysautonomia)

## The history of T4 use

At this point, you may be asking “If T4-only hypothyroid medication is so inadequate, why did it come into existence anyway?”

Its history starts around 1914 when the thyroid hormone T4 was first isolated from the rest of the thyroid by a biochemist named Edward C. Kendall, which was quite an accomplishment. In association with the University of Minnesota, he was the Head of the Biochemistry Section in the Graduate School of the Mayo Foundation. You can find biographical information on Kendall on the [www.nobelprize.org/](http://www.nobelprize.org/) website, and you’ll note that in 1950, he received a Nobel Prize for discovering the activity of cortisone. His work as to the isolation of T4 was reported in the *Journal of Biological Chemistry* (JBC), and reveals that the isolation came from 6500 pounds of hog thyroid glands.

Twelve years later, in 1926-27, British chemists Charles Harrington and George Barger were the first to produce and use synthetic thyroxine T4, and the New York Times reported that fact in the Dec. 12, 1927 issue, titling the article *Britons discover synthetic thyroxin* by T. R. Ybarra. Both also wrote the 1927 book *Chemistry of Thyroxine—Constitution and Synthesis of Thyroxin*.

## The first promising experiments with thyroxine

Thyroxine was originally used on two patients, with the first being a 61-year-old housewife named Mrs. A.S., who had success with previous hospital use of thyroid extract (older name for what we now call desiccated thyroid).

Observations of Mrs. A.S. included that she was mentally dull, overweight, swollen, and her face appeared harsh and dry. She was given thyroxine T4 intravenously, and they noted changes. She was “much brighter and more cheerful, her swellings were diminishing, and wrinkling was obvious on the backs of the hands and under the eyes.” When they removed the treatment, they saw that her skin became harsh once again, and her basal metabolic rate declined.

The second case was a 35-year-old housewife, Mrs. M.M., who was diagnosed myxoedema (older term for hypothyroid) in 1920, and who had not taken her thyroid extract (older term of desiccated thyroid).

When admitted to the hospital in 1926, Mrs. M.M. had a lack of energy and noticeable bodily swellings. After three intravenous injections of synthetic thyroxine, they noted that the thyroxine raised her basal metabolic rate, with a rise in her temperature and pulse. Additionally, she lost weight due to a "great loss of fluid from the system."

Both cases of Mrs. A.S. and Mrs. M.M. revealed that the use of T4 had positive results. But thyroxine never became a worthy treatment. Why? Because relying on an intravenous treatment was not practical. And thyroxine was known to have instability in the presence of light and air. Additionally, desiccated thyroid was working well during that time anyway.

*The fact that desiccated thyroid was successful (and remained so for many decades), and synthetic T4 was used intravenously and unstable, should have ended the T4 experiment.*

But T4-only as a thyroid treatment was to return to the medical and public eye thirty-five years later. The late 1950's and early 60's were a time when pharmaceutical companies started to heavily market and mass-produce their products with dollar signs in their eyes. Additionally, it was a time when false and negative claims were made against desiccated thyroid in several medical articles and journals. It was later identified as a hoax, but the damage was done.

By 1955, Knoll Pharmaceuticals of Germany developed the ever well-known Synthroid, a thyroxine now in tablet form. Dr. David Derry, a noted physician in Canada who graduated from medical school in 1962, stated to me in an email that he noticed a strong swing towards thyroxine treatment by 1963.

## **A faulty assumption**

Today, looking back at the early positive results with thyroxine of Mrs. A.S. and Mrs. M.M., and reading numerous studies and articles about the efficacy of thyroxine use, one might come to a knee-jerk conclusion that levothyroxine

sodium, aka T4, is and has always been a good product in the treatment of hypothyroid. Why else would my doctor prescribe it? Why else would there be hundreds of millions on these medications? Even the Synthroid website states:

*Synthroid offers safe and effective treatment to patients like you every day. Your thyroid medication is carefully prescribed by your doctor to achieve a delicate balance of thyroid hormone in your body.*

Additionally, you will find patients who state they are pleased with their T4-only treatment and the alleviation of some symptoms.

## Thud

Yet, a pertinent and reflective question remains: how much relief are you really getting from a T4-only treatment? Is 15% enough? Is 30% enough? What if there's no noticeable relief? Because the same conclusion is found in the experience of millions of patients worldwide who find out the truth: T4-only thyroxine treatment has a negative pattern of improvement and outcome in most thyroid patients, as shown in the compiled list of continuing symptoms earlier in this chapter.

In other words, in contrast to whatever improvements from a T4-only treatment can be documented in journals, implied in research, stated on websites or expressed by patients, the worldwide accounting of negative results is so widespread that I and a growing body of patients can conclude without a shadow of a doubt: thyroxine treatment is overall a huge and miserable failure!

In fact, my way of explaining it is this: *T4-only medication treatment does the job to the same degree that an elevator which only rises to the fifth floor of a 50-story building "does the job."* Sure, you may feel slightly better, and notice some results, but you are still left with your own degree and kind of hypothyroid symptoms due to an inadequate treatment. Or at the very least, you'll see symptoms mount as you age.

## Why has T4-only treatment been a huge failure?

Because the human body is not, and never was, meant to live on a storage hormone alone. You are not meant to live on water alone. You are not meant to live on food alone. You are not meant to live on T4 alone. Instead, your body is meant to optimally live on the entire complement of what your thyroid produces: T4, T3, T2, T1 and calcitonin.

As a result, T4-only treatment has earned an F on the report card of thyroid treatment for the vast majority. Millions of patients across the world are making it clear that they continue to have lingering symptoms of hypothyroid, whether perceived to be mild or severe, while on a T4-only treatment. We don't need research papers, double-blind studies, medical articles or glowing words in a pharmaceutical handout to tell us that *T4-only, thyroxine medications have near completely failed us and their use has simply lined the pockets of their makers.*

### ***T4-only tidbits:***

- \* *Says an insightful patient: "I have found a couple of uses for a bottle of Synthroid: 1) Doorstop 2) Prop for DSL modem (so it won't overheat). However, I do not recommend it to be taken internally. Ever. "*
- \* *The evidence is strong among thyroid patients: many cases of "fibromyalgia" appear on T4-only meds, and go away when optimally treated on desiccated thyroid.*





# CHAPTER 2

## So What Do Pigs Have To Do With It?

*"I've a right to think," said Alice sharply, for she was beginning to feel a little worried "Just about as much right," said the Duchess, "as pigs have to fly..."*

*~ Alice in Wonderland by Lewis Carroll*

*"Oh sure. I'm going to have more energy when pigs fly."*

Yup, that's exactly the sarcastic idiom I would have used if once upon a time, when I was on Synthroid and later Levoxyl, someone had predicted that I was going to have more energy thanks to a pig. A pig? Nope, I couldn't see a pig helping me. And I had spent too many years of living with constant compromises and miseries in my energy levels, even while a slew of doctors stated it was not my thyroid since I was "adequately treated" and my TSH was "normal."

But sometimes you just have to eat your bacon. Because lo and behold, not only did the pigs fly, they soared after I had switched from a T4-only medication to a porcine thyroid product, once known as thyroid extract, but now more commonly called *natural desiccated thyroid*.

### **More than a century of desiccated thyroid use**

If your ancestors had an identifiable thyroid problem, there's a chance they were treated with desiccated thyroid.

Desiccated thyroid was to see its modern medical debut in the late 1800's. And if you put recent dates together, that means hypothyroid patients were using this product successfully for more than five decades before the pharmaceutical levothyroxine money-eyed assault in the late 1950's and early 1960's.

In the early days, desiccated thyroid was either from pigs or sheep. I own a very early bottle of Armour desiccated thyroid, still with the product inside and sealed with a cork. And on the vintage browned label, it states THYROIDES DESICCATED and defines the powder within as fresh thyroid gland of the sheeps [sic].

Today, desiccated thyroid by prescription, also called natural thyroid or thyroid extract, is almost exclusively comprised of the whole porcine thyroid gland. Perhaps pigs were ultimately chosen because their tissue can be nicely compatible with our own.

Desiccated refers to the fact that the approved and inspected pig thyroid is frozen, minced, dried and milled into a fine powder. Several batches are probably combined to create a consistent lot of the full strength porcine thyroid powder. Testing is then done to make sure it meets the established specifications.

There are a few over-the-counter desiccated thyroid products made from bovine, and one in particular is made by Nutri-Meds, but this book will mainly focus on the prescription porcine varieties. If your religious beliefs or vegetarian stance create concern about the use of pork, see Addendum B.

## **The difference between T4-only and desiccated thyroid meds**

Unlike synthetic T4-only medications like Synthroid, Levoxyl, Eltroxin and others, desiccated thyroid provides the exact same hormones that your own thyroid would be giving you if healthy—not just T4, the storage hormone, but direct T3, as well as T2, T1 and calcitonin. U.S. Pharmacopeia prescription desiccated thyroid is measured according to specific amounts of T4 and T3 in one grain—38 mcg T4 and 9

mcg T3 in US brands, and only slightly different amounts in others. It's also stated to be approximately 80% T4 and 20% T3. One website<sup>2</sup> states that the ratio is 4.22 parts of T4 to one part of T3.

Rumor occasionally goes through the mill that desiccated thyroid is nothing more than T4 and T3, especially since nothing more than both are mentioned in the product paper insert. But pharmaceuticals will assure you that T2, T1 and calcitonin are simply not measured and are not removed.

Examples of brand names for prescription desiccated thyroid include<sup>3</sup>:

- Armour
- Naturethroid
- Westhroid
- Generic brands like Acella's NP Thyroid
- Canadian Thyroid by Erfa
- Australia's Desiccated Thyroid Extract
- Thyreogland in Germany
- Thyreoidum in Denmark

The US brand name Armour by Forest Labs is the oldest on the market and for many decades was the most well known. It was reformulated in 2009 with a flip-flop in the amount of dextrose and cellulose—dextrose going low and cellulose going high. Patients were not happy with the results, noticing a return of symptoms and the inability to do Armour sublingually. Naturethroid and Westhroid are distributed by RLC Labs (formerly Western Research Labs). Generic thyroid was made by Time Cap Labs or Major Pharmaceuticals (but ceased production in 2009 thanks to the FDA). Acella generic desiccated thyroid, which they named NP Thyroid, appeared on the market in late 2010. Patients have reported being very pleased with NP Thyroid, and it can be done sublingually.

2 [http://www.frx.com/pi/Armourthyroid\\_pi.pdf](http://www.frx.com/pi/Armourthyroid_pi.pdf)

3 See Addendum A for ingredients for all

Some thyroid patients have used two different desiccated thyroid products from Thailand: Thyroid-S or Thiroyd, both with excellent results and comparable in results to prescription US brands. Occasionally there will be sporadic reports of weak batches. Canada's version is simply called Thyroid and is distributed by Erfa. One grain contains 35 mcg of T4 and 8 mcg of T3 (as compared to 38/9 in US brands). Erfa's Thyroid retains the ability to be done sublingually, which has met approval by patients.

It's stated that when T4 converts to T3 in the one grain size, you can end up with approximately 25 mcg of T3—the combination of the direct T3 and the conversion to T3.

Australia's and New Zealand's desiccated thyroid is usually compounded by local pharmacists. Denmark's desiccated thyroid is called Thyreoidum, and Germany has one called Thyreogland.

Some manufacturers like Forest Laboratories, Inc. and RLC Labs have pressed the desiccated thyroid powder into a tablet and others have put it in capsule form. Common dosage strengths include: ¼, ½, 1, 2, 3, 4 and/or 5 grain tablets depending on the pharmaceutical distributor. With most, one grain equals 60 mg; others will equal 65 mg.

All desiccated thyroid powders used in the prescribed thyroid medications are labeled Thyroid USP, meaning they meet the high quality and strict standards of the United States Pharmacopeia (USP). The USP is an independent, science-based public health organization. Simply put, they set the standards for what would constitute a good quality medication. You can view their website here: [www.usp.org/aboutUSP/](http://www.usp.org/aboutUSP/). By the way, next time your doctor claims that desiccated thyroid is unstable or unreliable, remind them that strict USP standards are followed by the makers of prescription desiccated thyroid, i.e. unstable and unreliable are not in the dictionary of a USP standardized product.

Australian compounding pharmacies use the same Thyroid USP standards desiccated powder. Sriprasit Pharma Co. Ltd. in Thailand, which makes a form for their desiccated thyroid called Thyroid-S, state they also use the same Thyroid USP standard desiccated powder.

## **Five components of desiccated thyroid**

Desiccated thyroid contains the same five well-known hormonal components as your own thyroid. They are:

**T4** (also called l-thyroxine, levothyroxine, or thyroxine) is the 4-iodine-molecule storage hormone of the thyroid. It's sometimes called the primary hormone, since approximately 80-93% of what your thyroid produces is T4. T4's main function is to convert to the active hormone T3 as your body needs it beyond the T3 given directly. About 40% of T4 converts to T3 and the rest goes to mostly Reverse T3 (RT3) as a way to remove unneeded T4. T4 also plays a role in brain formation, as well as brain function. Most T4 is bound by transport proteins; a small amount is "free", i.e. unbound and usable. T4 is meant to cross the cell membranes from your blood.

**T3** (also called triiodothyronine) is the 3-iodine-molecule "active hormone" of the thyroid, and is approximately 7-20% of your total production. It has the greatest effect on your body's energy level and overall health and well-being. T3 makes its appearance when T4 loses one of its molecules to become T3—a peripheral (away from the thyroid gland) conversion of T4 to T3. But it's also made directly. It can be four to ten times more active than thyroxine T4. Most T3 is bound by transport proteins; a small amount is "free", i.e. unbound and usable. T3 is meant to cross the cell membranes from your blood.

**T2** (also called diiodothyronine) is the 2-iodine-molecule hormone which may play a role in the production of the deiodinase enzyme that helps convert T4 into T3. It also appears to have some effect on metabolism, thus playing a role in burning body fat.

**T1** (also called moniodothyronine or just amine) is a hormone which may play a role in keeping thyroid function in check and influencing the heart.

**T0** is mentioned in some literature as a fifth thyroid hormone. But the information I can find is minimal. If it exists, it may play the same role as T1.

**Calcitonin**, which is primarily secreted by your thyroid, responds to too-high levels of calcium in the blood. It inhibits the release of more calcium from your bones to the blood, and can play a good role in the prevention or reversal of osteoporosis, as has been experienced by several patients

who switched to desiccated thyroid and dosed high enough to alleviate symptoms.

### **The first documented use of desiccated thyroid**

The first successful, medically documented use of desiccated thyroid (then called thyroid extract, or glandular extract) occurred in 1891 with a 46-year-old woman named Mrs. S. It was later documented in the March 1920 *British Medical Journal* by George R. Murray, MD<sup>4</sup>. Murray is stated to be the first doctor to use animal extractions to treat hypothyroidism. (and good for him!) Thyroid Extract at that time was from sheep, but eventually switched to porcine.

When Mrs. S was in her early 40's, family members noted that her speech and actions were slow, and Mrs. S found housework to be difficult. Her physical features also became enlarged, probably due to water retention. Her physicians noted that she had no interest in seeing strangers, and she was sensitive to cold weather. Her body temperature was always low, varying between 95.6 and 97.2, with a pulse between 60-70. She had little facial expression, dry skin, fine and thin hair. Her movements were noted as slow and labored, as was her speech and memory. Her periods had also ceased.

Physicians of that day diagnosed her with an advanced case of hypothyroid, which was then called Myxoedema (and for a short while was also called Gull's Disease, named after Sir William W. Gull, MD, who in 1874 published his observations in five women suffering from hypothyroidism.)

It was decided to inject her with thyroid extract, and within three months, great change was noted. Her bodily swellings were gone, and her face had greatly improved in its appearance, as well as expressions. She now spoke more rapidly, answered questions with greater ease, and her memory improved. She was now walking the neighborhood again, and could once more do housework with ease. She was

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4 [www.britannica.com/eb/article-9054362](http://www.britannica.com/eb/article-9054362) George-RedmayneMurray.

less sensitive to the cold. Her menstruation improved. And her temperatures rose.

Mrs. S was later switched to oral administration (which may have been fried sheep thyroid gland—sounds tasty, don't you think? Gulp.) and by 1918, she was given dry thyroid extract in a tablet form. She maintained her better health for 28 years until she died in 1919. It was documented that she consumed over nine pints of the liquid thyroid extract, which was estimated to come from 870 sheep!

Subsequently, for several decades, patients with Myxoedema (hypothyroid) were treated successfully with porcine thyroid extract (desiccated thyroid or natural thyroid). The porcine may have been chosen because allergic reactions are rare.

## Medical books and the mention of desiccated thyroid

By the time the 1941 *Goodman and Gilman's Pharmacological Basis of Therapeutics* came out, both thyroxine (Thyroxin, U.S.P.) and dried thyroid gland (Thyroid, U.S.P.) were mentioned, but dried thyroid gland was called the preferred method of treatment. Dried thyroid gland was measured according to its iodine content (whereas now, it's measured according to its T4 and T3 content.) From the 1951 book called *Modern Medical Counselor* comes the following recommendation on how to treat Myxoedema, which shows desiccated thyroid was still the successful treatment of choice:

*Some convenient preparation made from the whole thyroid gland substance is the rational remedy for myxoedema. It brings remarkable improvement. The patient feels better, thinks more clearly and looks better. There is likely to be considerable reduction in excess weight<sup>5</sup>.*

In the 1970, 4th edition of the classic *Pharmacological Basis of Therapeutics* by Goodman and Gilman, desiccated thyroid was still described positively:



*Thyroid USP is a highly satisfactory preparation for clinical use. Its continued popularity does not derive merely from a reactionary attitude, although at first sight the preparation might seem to be crude, old-fashioned, and poorly standardized. It is evidently uniformly well absorbed unless it has an enteric coating, and the potency is sufficiently standard that variation cannot be detected clinically if the official preparation is prescribed<sup>6</sup>.*

An event occurred around 1963 which caused a turnaround in the popularity of desiccated porcine thyroid and the unfortunate swing towards synthetic levothyroxine, T4-only treatment. The same 1970 4th edition of *Pharmacological Basis of Therapeutics* gave the following clue as to what occurred:

*A few years ago, a large batch of material came into the hands of a number of distributors in the United States and Europe and, although of proper iodine content, it later proved not be thyroid at all. This episode gave thyroid a bad name because several publications about the unreliability of thyroid appeared before the hoax was uncovered<sup>7</sup>.*

And it appears physicians from that time on fell for the hoax and the subsequent negative articles without a blink of an eye. Over time, nearly all patients were switched to the highly-touted levothyroxine T4-only medications. Newly diagnosed patients were started on thyroxine. By making this mass change in the way hypothyroid patients were treated, the tragic and far reaching supposition was made that T4 would convert to adequate levels of T3.

Of course, though it's speculation, some patients wonder how much the Knoll Pharmaceutical Company, which first tableted Synthroid in 1955 as levothyroxine sodium, played a part in promoting the switch, as well, via strategic and successful promotion. But that successful promotion of levothyroxine since the 1960's has also resulted in decades of unsuccessful treatment of millions of hypothyroid patients.

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Old timers who used to be on desiccated thyroid, and who were switched to levothyroxine, state they saw the return of old hypothyroid symptoms but didn't know it was the result of the new medication. They put their blind faith in their doctors.

And what a price we have paid!

Doctors to this day seem to be mindless cattle in the chutes of their pharmaceutically-financed, medical school training, appearing to have no memory or knowledge of the success of desiccated thyroid. No less is the influence of the commission-paid pharmaceutical rep, who enters each and every office in his or her nicest suit, brightest teeth, and friendliest smile in order to sell each doctor on the latest drug.

And yet, if certain hypothyroid symptoms persist, what doctor doesn't pull out his handy-dandy prescription pad, or pull that sample off the shelf, in order to treat the subsequent undertreated hypothyroid symptoms, such as chronic low grade depression, rising cholesterol, anxiety, mental health issues like depression or bi-polar, hair loss (alopecia), digestive issues, low B12, low Vit. D... and so many more symptoms of undertreated, poorly treated hypothyroid. In other words, the body is not meant to live on the conversion of T4 to T3 alone.

## **The momentum of change by thyroid patients**

Though it took nearly five decades of T4-only inadequacies for patients to get wise and dare to question their treatment, the step back to desiccated thyroid seemed to start around the turn of the millennium. Thyroid patient Mary Shomon started her Yahoo Thyroid group in 1999, and mention of Armour desiccated thyroid shows up soon after. The Yahoo Natural Thyroid Hormone Users group started in 2002 by the author of this book as a patient group more focused on desiccated natural thyroid and with more reactionary stance against poor treatment. Several other smaller yet active patient thyroid groups popped up around the same time.

On a humorous note, the 2006 edition of *Goodman & Gilman's Pharmacological Basis of Therapeutics* erroneously yet seriously states:

*Desiccated thyroid preparations, derived from whole animal glands, contain both thyroxine and triiodothyronine and have highly variable biologic activity, making these preparations less desirable.*

Highly variable biologic activity and less desirable? Patient experience begs to differ.

From this you come to realize that even the “bible of pharmacology” doesn’t have it right. As stated above, FDA-approved, prescription desiccated thyroid is made according to the official standards and specifications for consistency of the United States Pharmacopeia (USP).

Additionally, not a patient on desiccated thyroid preparations would state that their results are less desirable, especially considering this treatment gives you the same hormones as your own thyroid would have been giving you when healthy. Patients soar on desiccated thyroid when they dose by the elimination of symptoms, first and foremost, in the presence of adequate cortisol, whether from healthy adrenals or supplementation, and when any other issues are discovered and corrected such as low ferritin and more. *The proof is in their experience!* So who are the doctors listening to: the words in a pharmacological textbook...or patients?

The 21st century worldwide patient revolution makes it clear: T4-only treatment leaves patients with lingering symptoms, whether sooner or later, and a switch to desiccated thyroid is changing lives with renewed energy and health and the elimination of ever-present symptoms of an inferior treatment. Desiccated thyroid works!

### ***Desiccated thyroid tidbits:***

- \* *Patient-requested alternative fillers for compounded desiccated thyroid include organic sugar, olive oil, or powdered acidophilus.*
- \* *If you are unable to stand the taste of desiccated thyroid and it needs to be chewed up before swallowing, add sugar or honey.*

# CHAPTER 3

## What Thyroid Patients Have Learned: The bible of our experience

*No two minds ever come together without, thereby, creating a third,  
invisible, intangible force which may be likened to a third mind.*

~ Napoleon Hill

At the dawn of the 21st century, when a growing body of thyroid patients began to switch from T4-only medications like Synthroid, Levoxyl or Eltoxyn to desiccated thyroid like Naturethroid, Erfa's "Thyroid", Armour or other brands, they and their doctors also began to tread new ground. It has been a journey seeking a thyroid treatment bliss, but it hasn't been without ruts in the road. It was a road less traveled.

And because the journey had been new, we as patients had to learn by the seat of our pants. Granted, there were a small handful of insightful doctors and medical professionals in literature that helped us along the way—Peatfield, Derry, Jeffries, Brownfield, Lowe, Dommissie, Rind, Lam, to name a few in the early stages of our growth. But overall, we've had to blaze new trails when the vast majority of our personal doctors either weren't knowledgeable enough, open-minded enough, or cared enough about desiccated thyroid.

So, we were modern pioneers, inspired by the path of hypothyroid patients long before us who were treated successfully on desiccated thyroid. The following represents the hard-earned knowledge of patients who switched to desiccated thyroid and regained our health, well-being and bliss. We now give it to you.

## **1. Some lab work we need; others we don't.**

Laboratory work is said to make the physician more competent in the diagnosis and treatment of his patients. And patients welcome the extra information, since the results can find answers to mysterious symptoms.

Yet the most unfortunate and egregious mistake doctors have been making for decades is to regard those ink spots on a piece of paper as being far more important than obvious symptoms, aka clinical presentation. *Symptoms*, not man-made lab work, should be the throne of diagnosis and the principal guide in your diagnosis and dosing. For thyroid patients, lab test choices and results with their erroneous normal ranges have been the biggest culprit in keeping patients undiagnosed, as well as under-treated.

For years, the two lab tests that doctors have worshipped as if they came from God Almighty are the TSH (Thyroid Stimulating Hormone) and the total T4, which is also written just as T4. At the very worst, doctors moved to simply testing the TSH alone.

Or they used the outdated and fairly useless "Thyroid Panel", which tests the total T4, the TSH, occasionally the free T4 or total T3, and other lab results such as the Free Thyroxine Index (FTI) or the T3 Resin Uptake (T3RU) or T7 (see Addendum C for definitions). Of course, all the latter are good if you want the lab facility to make plenty of money and less of it in your pocket.

We, as patients, have learned that there are certain lab tests, contrary to what most doctors had been requesting, which can help us in our assessment of thyroid disease and in our treatment with thyroid medications. They include:

- TSH (a pituitary hormone used to ascertain if there is a pituitary problem, not to diagnose or dose by)
- *Free T4*
- *Free T3*

- Two thyroid antibodies tests: TPOab (Thyroid Peroxidase) and TgAb (Antithyroglobulin)

The *free* in front of the T4 and T3 represents what is available and unbound in your blood serum by proteins, i.e. what is usable. Without that *free*, the labs are only measuring the total hormone, which tells you nothing about what is usable.

For diagnosis, patients have discovered that a free T3 either mid-point or below is often a good confirmation of what symptoms are already telling you. Or, the free T4 can also reveal our hypo- when it's low in its respective range.

We have also learned to only use the TSH to ascertain poor pituitary function (which can be revealed by having a very low TSH in the presence of raging hypothyroid symptoms). Granted, you might be the rare patient who finally does have an above-range TSH to help diagnose your hypothyroid to a lab-obsessed doctor. But overall, a majority of patients go years before the TSH conforms to their symptoms. (See Chapter 4.)

Antibodies are blood proteins produced by your immune system in response to a problem. There are two antibodies and both need to be measured to ascertain if you have an autoimmune version of thyroid disease called Hashimotos (See Chapter 9.):

- Those targeting your *thyroid peroxidase* (an enzyme that is important in the production of your thyroid hormones).
- Those targeting your *thyroglobulin* (a protein carrier for your thyroid hormones).

It is too common for doctors to state that these tests are useless (i.e they see no evidence to order them, even tho your symptoms point to Hashi's), or for only one of the two antibodies labs to be performed. Yet, we have learned both to be valuable, since one can be normal and the other above range. Additionally, knowing you have an autoimmune attack means you can swing between hypo- and hyper like a pendulum. That latter fact, in turn, can make it useless to dose by lab values! (See Chapter 9 on Hashimoto's Disease)

## 2. Additional lab work can be helpful.

Because hypothyroidism can wreak havoc in our bodies, patients have discovered a whole range of additional lab work which is critical. These include but are not limited to:

- 24-hour adrenal cortisol saliva test (requires no prescription)
- Ferritin (iron storage protein)
- Full iron panel, which should include serum iron, % saturation, and TIBC at the least
- B-12
- Vitamin D
- Magnesium, potassium, sodium, calcium, and chloride (or a Complete Metabolic Panel)
- DHEA
- Estrogen
- Progesterone
- Testosterone
- SHBG (Sex Hormone Binding Globulin)
- Iodine Loading Test (a urine test and can be ordered by the patient from the web)
- Reverse T3 (at the same time you do a Free T3). See Chapter 12.

*\*\* See the second half of Addendum D on how to prepare for lab tests*

It's rare to see any hypothyroid patient without problems in some or many of the above. For example, I have estimated that more than 50% of thyroid patients have a cortisol problem, first too high, or a mix of highs and lows, or all lows, each causing problems. Ferritin/iron issues come next in frequency. Problems in both will always cause issues in raising desiccated thyroid as well as the production of too much RT3<sup>8</sup>. (See Chapters 5 and 6 for adrenals, Chapter 12 for RT3, and Chapter 13 for ferritin.)

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8 [www.goodhormonehealth.com/Iron%20Deficiency%20and%20Fatigueaug06.pdf](http://www.goodhormonehealth.com/Iron%20Deficiency%20and%20Fatigueaug06.pdf)

Female and male hormonal imbalances come next, adding to many of our problems. Due to hypothyroid, women can find themselves with imbalances in their estrogen and progesterone, as well as testosterone levels. Some have problems getting pregnant. Some bleed too heavily in menstruation. Some enter menopause too early. Hypothyroid decreases SHBG—a protein which carries testosterone and some estrogen through the body. The latter can cause hormonal swings. The symptoms of any of the above sex hormone imbalances can also mimic hypothyroid symptoms.

Equally frequent in thyroid patients are low levels of Vitamin D, B12, iodine and/or potassium, magnesium, and other electrolyte minerals. Years of hypothyroidism lead to poor absorption. I had chronically low levels of both potassium and magnesium, and sub-optimal levels of D and B12.

Ask your doctor for other lab test recommendations, like the Epstein Barr Virus, which can reactivate in some.

### **3. Our adrenal health plays an important role in our thyroid health.**

Remarkably, we have discovered that a large percentage of thyroid patients have either dysfunctional adrenal function, or sluggishness, also called adrenal fatigue. Or it can be sluggish communications between your hypothalamus, pituitary and adrenals (HPA). The end result is a mix of high and low cortisol, or mostly low. Cortisol is released by your adrenals to help you cope with stress, besides playing a role in facilitating the thyroid receptors on your cells in receiving the thyroid hormones from your blood.

The consequences of erratic cortisol production are profound for thyroid patients. Not only do you lack the ability to appropriately cope with stress, you lose the success of raising your desiccated thyroid to optimal levels. Thyroid hormones, especially T3, will build high in your blood rather than make it to your cells. You will also have hyper-like symptoms and misery as you try to raise desiccated thyroid. (See Chapter 5)



Why do so many thyroid patients have an adrenal problem? We can surmise that years of being undiagnosed due to doctors' over-reliance on faulty labs and cheesy normal ranges, followed by poor treatment with levothyroxine or other T4-only medications, have both played a role in the overworking of our stress-busting adrenals to make up for the slack. To the degree that your hypothyroid condition continues, to the same degree and ten-fold your adrenals try to make up the slack.

Additionally, we can surmise that chemicals we are exposed to daily in plastics, food and water—including but not limited to fluoride, bromide and more, have played a taxing role in the chronic stress on our adrenals. Add to that the emotional stress of our modern lives and you have a recipe for disaster for your adrenals, as well as potential malfunction of your hypopituitary axis—the message system between your hypothalamus, pituitary, and thyroid/adrenals. That heavy workload plus malfunctioning is followed by adrenal dysfunction.

Thus, at the beginning of our thyroid diagnosis or treatment, we have found it wise to learn the status of our adrenal cortisol production. Chapter Five gives you Discovery Steps to help you discern if you have adrenal problem. Discovery Step One asks you pertinent questions. Discovery Two explains certain tests you can do in the privacy of your own home. If either or both are suspicious, it can be time to consider a 24-hour adrenal saliva test, which unlike a one-time blood test commonly prescribed by doctors, will test your cellular cortisol levels are four key times during a 24-hour period (or six with some facilities). It doesn't require a prescription, and it's less stressful since you do it in your own home. (See Addendum D for places to get your cortisol tested with saliva.)

The ACTH STIM test is commonly prescribed by doctors if you suggest you may have an adrenal problem. ACTH is the hormone secreted by your pituitary with the purpose of motivating your adrenals. But most patients have found themselves with normal results, even when the saliva test revealed otherwise. Your ACTH may be normal, but your adrenals too sluggish to perform. (See Chapter 5.)

The 24-hour urine test can also prove to be inadequate, since it takes the average of a total day's production of cortisol, leaving

you clueless as to what specifically is going on with your adrenals at specific times of the day.

If we find ourselves with cortisol issues, treatment ranges from the use of adaptogens, to over-the-counter adrenal cortex, or prescription HC. Chapter 6 covers this topic. If cortisol levels are overall too high, you need to work to lower it.

Some with adrenal dysfunction choose to get on T3-only. (See Chapter 12.)

#### **4. There are successful ways to transition from T4 to desiccated thyroid.**

When making a switch to desiccated thyroid, we and certain wise doctors have found two successful strategies: first, to take our last dose of T4 (aka Synthroid, Levoxyl, Levothyroxine, etc.) one day, and start on a safe dose of natural desiccated thyroid the next, as explained below.

Or second, a patient can lower her T4 dose in half, and start on desiccated thyroid. But it will be important to continue lowering the T4 with each raise of desiccated thyroid to prevent an excess of T4. Most desiccated thyroid is 80% T4 anyway!

#### **5. We learned safe ways to start on and to raise our desiccated thyroid.**

Generally, we and informed doctors have found that a safe dose to start on is around one grain, which equates to 60 or 65 mg depending on the brand used. Some may need to start lower due to heart issues, excessively low cortisol, or other conditions. Some can start a little higher, but one grain has been our experience as a safe introductory amount for most.

For me, starting on a safer lower dose was very important due to having a benign heart condition called Mitral Valve Prolapse (MVP). My mitral valve always proves itself to be very sensitive to certain substances or changes. So it was important for me to start as low as one grain to allow my valve to adjust to the direct T3, which my body was starved for, and to raise in small amounts every week or two. I had heart palpitations when I started desiccated thyroid and with every raise, but they always subsided within a few days. This adjustment to the direct T3 can be important for your entire body, even if you don't have MVP.

Once patients start on one grain, we and some of our best doctors have learned to hold that amount one to two weeks, then start raising, again holding each raise by approximately one half grain before raising again. For many of us, if we fail to raise our introductory dose within a few weeks, our hypothyroid symptoms start to return with a vengeance due to the negative feedback loop between the hypothalamus, pituitary and thyroid gland.

Note that the above is general, and there may be some exceptions. For example, some can do well on only one grain for a longer period. But if you are one who needs to raise above the introductory dose, and most seem to fall in that category, getting close to the 2-3 grain area is where we've found it wise to hold our doses at least 4-6 weeks to allow the T4 in desiccated thyroid to build (which takes time, as compared to the direct T3, which is fairly immediate) and show its T4-to-T3 conversion results. It appears that a large body of patients on the continuum of doses from low to high end up needing 3-5 grains, which may be closely equivalent to the amount that a healthy thyroid might be making<sup>9</sup>.

Occasionally, some doctors find their patients needing even 6 grains or more when an optimal dose is found, as mentioned below. And of course, it's individual, since we occasionally see some patients lower.

## **6. To find our optimal dose of desiccated thyroid, we seek three criteria in no particular order.**

Those three criteria are:

- A mid-afternoon consistent temperature close to 98.6, using a mercury thermometer, along with normal blood pressure and heart rate
- The complete or near-complete elimination of our hypothyroid symptoms, and
- A free T3 towards the top quarter of the range, no matter how low the TSH will plunge. *Note: having a free T3 at the top of the range, if not over, in the presence of continuing hypo-symptoms, is a clue you may have adrenal issues or low iron. (See Chapter 5.)*

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<sup>9</sup> [www.thyroidmanager.org/Chapter2/2-frame.htm](http://www.thyroidmanager.org/Chapter2/2-frame.htm)

For females, one's temperature can be greatly affected by the rise and fall of female hormones, especially after ovulation. But before ovulation occurs, we've been surprised to notice that it's common to achieve the 98.6 (or very close to it) in the mid-afternoons when optimal on desiccated thyroid.

Dosing by the elimination of symptoms was done successfully for decades before the TSH came into existence before the 1970's, and we are repeating that success. *The free T3 being in the upper part of the range is simply another guide, making sure we do not take desiccated thyroid before our labs, which only results in a false high reading.*

## **7. We have learned that symptoms diminish with each raise of our desiccated natural thyroid.**

It's very individual, but some of the first improvements we see as we raise our natural desiccated thyroid include the softening of our hair and skin, lessening of in our brain fog, and better energy. As we continue, our depression lifts, and aches and pains cease, and our cholesterol falls. Gone is the fatigue that was once classified as the mysterious Chronic Fatigue Syndrome (in lieu of having Lyme Disease, acute EBV, etc.). It gives back the stamina that we never had. We see an improvement in our bone density and strengthening of our heart muscle.

Raising our desiccated thyroid improves or removes our chronic headaches (in the presence of strong adrenals) and improves our female hormonal issues. It helps us get pregnant when that goal is desired. It stops our hair loss and slowly allows new growth to come back in. It gives us back our sanity.

Note that all the above occurs in the presence of healthy adrenal function, good ferritin and iron levels, and correct treatment for either.

## **8. Problems that arise when on desiccated thyroid are correctable.**

For those of us who have had problems with desiccated thyroid, it was due to four correctable issues, in most cases:

- ***Being held on low introductory doses far too long, allowing our hypothyroidism to return with a vengeance.*** We and wise doctors have learned NOT to stay on an introductory dose much longer than two weeks or less before raising. This can be challenging if you have a doctor who expects you to wait 6-8 weeks and more until your next appointment.
- ***Being held hostage to the unreliable TSH lab value.*** Since the TSH and its dubious “normal” range can fail us, we dose by symptom-elimination first and foremost, as well as temperature and normal blood pressure, and allow the free T3 to be used as an adjunct to what our symptoms already tell us.
- ***Failing to recognize low-functioning sluggish adrenals and low cortisol.*** Cortisol is needed to raise blood sugar levels in our cells, which in turn interact with T3. And without healthy adrenals making enough cortisol, problems develop when raising thyroid meds that resemble hyper symptoms, such as anxiety, shakiness, nausea, sleep issues, feeling hot, etc. Sluggish adrenals also result in a high free T3 lab result with continuing hypo- symptoms. Depending on results of saliva cortisol labs, we then choose either adaptogens (for minor issues or highs and low mix), or over-the-counter Isocort or Adrenal Cortex (for moderate low cortisol), or prescription cortisol, aka Cortef (Hydrocortisone or HC) for more serious low cortisol. Once we have found our optimal dose of cortisol, we can then continue with raising our desiccated thyroid, or T3, while on adrenal support.
- ***Having low ferritin or inadequate iron levels.*** Because of digestive issues or low hydrochloric stomach acid, having inadequate levels of iron is common among thyroid patients, as discovered by doing the labs for ferritin (storage iron), % saturation, serum iron and TIBC. Low levels can cause problems as we try to raise our desiccated thyroid, besides give us symptoms resembling those of hypothyroid if levels are low enough. We then

supplement with up to 150-200 mg “elemental iron” daily in tablets (less in liquid iron, since it’s highly absorbable), taken with food and Vitamin C—the latter to counter free radicals. Improving low levels can take 6-8 weeks. If ferritin looks high, it can point to point to inflammation, which causes iron to be thrust into storage. (See Chapter 13.)

## **9. Desiccated thyroid seems to work best when we multi-dose it, and we find benefit in taking it sublingually if a brand allows it.**

Since healthy thyroids produce hormones as needed throughout the day, we emulate that by multi-dosing our desiccated thyroid rather than taking it in one big dose in the morning, which not only puts too much T3 in the body at once, but can leave you sleepy in the late afternoon. We all experiment to find what works best for us, and generally, that means taking the highest amount in the morning, followed by a lower amount in the early afternoon. Or, we can take three doses—morning, early afternoon, late afternoon, etc. Some even take a final small dose at bedtime. Since the direct T3 in desiccated thyroid peaks about two hours after you take it, multi-dosing prevents a huge spike, which can be quite strenuous on your adrenals.

Some brands of desiccated thyroid can be done sublingually (under the tongue) due to the lower cellulose amount. Erfa’s Thyroid in Canada and Acella’s NP Thyroid are examples. First, your mouth saliva starts the digestive process by breaking down large molecules into smaller ones, helping absorption into your bloodstream via millions of tiny capillaries that line your mouth. Additionally, sublingual bypasses the destroying gastric action in your stomach where you can lose some of the thyroid ingredients, as well as bypassing the liver metabolizing action. In other words, you get more of what you give yourself via sublingual rather than swallowing.

This does not mean you can’t swallow your desiccated thyroid and get benefits. Some patients prefer swallowing, and you will still get benefits! But if you do swallow, avoid swallowing calcium,

iron and estrogen at the same time, since all will bind some of the thyroid hormones as they mix in your stomach. On a positive side, swallowing desiccated thyroid with food slows the release of the thyroid hormones to your body, distributing the direct T3 more evenly throughout the day.

Unlike thyroxine, you do not have to swallow desiccated thyroid on an empty stomach.

*Note: the brand Armour was reformulated in 2009 with an increase in cellulose and a decrease in sucrose. As a result, patients got better results by chewing the tablet up before swallowing as a way to release the desiccated thyroid from the now harder tablet.*

## **10. We have learned not to take our desiccated thyroid before we give blood for lab work.**

This directive is important enough that you may need to tie a little string around your finger to remind yourself. Namely, the direct T3 found in desiccated thyroid peaks approximately two hours after we swallow or take it sublingually, and with a slow decline, causing our free T3 lab result to look high and give a false impression of hyper to doctors who are obsessed with lab work. Thus, we have found it wise to avoid taking any desiccated thyroid before we do our scheduled labs. In other words, we take our final dose the day before, and refrain from doing our morning dose until we can get our labs done in the late morning or early afternoon. This refrain from taking desiccated thyroid can also be true for saliva tests, where you should only swallow it after the noon spit and the afternoon spit.

## **11. Wintertime or intense activity can heighten our need for a bit more desiccated thyroid.**

If we are frequently exposed to cold air during the winter, we have learned that it can be wise to add a slight amount of desiccated thyroid, such as  $\frac{1}{4}$  grain, to our daily optimal dose. This slight dose raise can also be true if we participate in a strenuous activity in any season of the year, since the activity can increase the need for the direct T3. If we are on needed adrenal support, a strenuous activity, stress or illness can dictate the need for a bit extra cortisol, as well.

## **12. Good doctors can be hard to come by, but we look for certain attributes.**

Generally, we as thyroid patients have experienced that a large body of our doctors have been unwilling to help us achieve optimal thyroid treatment. We have experienced many to be excessively rigid about prescribing T4-only medications, ignorant about desiccated thyroid or adrenal problems, closed minded to our own knowledge about our bodies, and too obsessed with lab work like the TSH rather than listening to the clinical presentation of our symptoms.

Additionally, we have repeatedly found endocrinologists to be the least open-minded, besides rigid about the TSH and thyroxine medications. There are exceptions, but few.

We have learned to find a doctor who is friendly about the use of desiccated thyroid and who helps us dose according the elimination of symptoms, as was done successfully for decades before labs came into existence, rather than simply using lab results. We also value doctors who work with us as a team, respecting our own wisdom since we live in our bodies, and our own knowledge via research and reading important books like *Stop the Thyroid Madness*. (See Addendum E on how to find a Good Doctor.)

## **13. Iodine may be a beneficial supplement to support your thyroid.**

Many patients use Lugols, a liquid form, either topically or with drops into juice or water, or Iodoral, a pill form. Moving up to 50 mg has been the recommended dose in raising one's low levels; others stay lower in the iodine amount. The use of iodine helps eliminate toxins from your body, especially bromide. This toxin release can produce symptoms such as fatigue, pimples, or a headache. The recommended solution is taking supporting nutrients such as minerals like selenium and magnesium, as well as Vit. C, sea salt and more.

Hashimoto's patients, as well as adrenal patients, have reported both negative and positive experiences with iodine, ranging from an increase of antibodies, to further stress on one's



adrenals. On the other hand, other patients who used iodine have had very positive experiences, from a lowering of antibodies, to better adrenal function and even lowering of HC. The key for many who had positive experiences may be the use of the supporting nutrients mentioned above.

Because patients are still learning about iodine use, I highly recommend that patients do their own research to make an informed decision. The resources section at the end of this book lists good patients groups to engage in discussion.

#### **14. We have learned to be our own best advocates.**

In previous generations, and including our own, it's been common to look at the doctor as an extension of God Almighty: my doctor knows what's best; my doctor will tell me what to do; my doctor can figure out what is going on; my doctor knows more than I know; my doctor will do the right thing to make me well. Most all of us have spent years entering our doctor's offices and giving our power away.

But thyroid patients have learned to walk into that office knowledgeable (which this book will help you do), and to expect the relationship to be a team—the doctor's medical school training and experience, and your own intelligence, wisdom and intuitive knowledge since you live in your body. This has become especially crucial for thyroid patients in light of local doctors who may know little about desiccated thyroid, sluggish adrenals, or dosing by symptoms rather than poor lab work.

#### ***Things We Have Learned Tidbits:***

- \* *When a desiccated thyroid tablet is too hard to do sublingually, patients have learned to chew it up before swallowing for better results.*
- \* *Give your power away in the doctor's office; risk staying sick. Expect to share your power in the doctor's office; risk getting well.*

# CHAPTER 4

## TSH: Thyroid Stimulating Hoax

*(aka, why you may still be hypothyroid  
with a normal TSH lab result)*

It's probably one of the most commonly prescribed lab tests worldwide—the Thyroid Stimulating Hormone, aka TSH test or thyrotropin. In fact, talk to your endocrinologist or most any medical-school-trained doctor, and you will be told the TSH lab test is a reliable gauge of your thyroid function, i.e. whether you are hypo-, hyper, or normal. The same doctors would also state that the TSH lab is an accurate guide to determine the right dose of thyroid medications. Even the most prestigious medical websites and journals will state the same, one way or the other.

And it's a pronouncement which has been going on for years. But, experiences of patients have found both of the above TSH pronouncements (reliable physiologic marker and accurate dosing guide) to be totally and unequivocally false!

In fact, it's too common to see the majority of thyroid patients, who have obvious and classic hypothyroid symptoms, report that a doctor pronounced them “normal” for years because of a TSH lab result which fell between the two man-made parameters of the so-called “normal” range, which might be the old 0.5 - 5.0, or the more recent 0.3 - 3.0. The end result: the doctor's overt reliance on the TSH test and its dubious range browbeats us into believing that we must be crazy, hypochondriac, or at the very least, just plain ol' mistaken. Cough.

Finally, after years go by... voila! The ink mark on the piece of paper confirms what our symptoms told us for years anyway. But patients question: where is the victory in the diagnosis when they had to suffer for so long?

Joan noticed she needed afternoon naps after her normal pre-lunch bike rides, whereas before, her energy levels were high enough to ride again in the afternoon. Concerned, she made an appointment with her family doctor, who first sent her to do the TSH lab work.

*When I sat down in his office and went over my fatigue, he outright dismissed it, telling me I simply may be pregnant. Pregnant!! I was single and had not had a relationship with anyone for months! When I asked about my lab results, he just looked at me and said everything was quite normal. Wait a minute. It was normal to need naps that I hadn't needed before? I was confused, but he was the expert. And it took me four more years of a "normal" TSH lab tests and losing my ability to ride my bike without consequences before he diagnosed me as "borderline" hypothyroid.*

Joan's story of being undiagnosed for years due to the TSH lab is so common that it reeks of scandal. In fact, I have observed many a patient who clearly had symptoms of hypothyroid for years before their TSH lab result even came close to clueing in their symptom-blind doctors.

### **What is the TSH?**

In your body, the Thyroid Stimulating Hormone (TSH) is synthesized and secreted by your pituitary gland...i.e. it's a pituitary hormone, not a thyroid hormone. It's part of a negative feedback loop called the thyroid-pituitary-hypothalamic axis, and it works like this:

- The hypothalamus (a tiny sensitive gland in your brain)
- Produces TRH (aka Thyrotropin Releasing Hormone)
- In order to stimulate your Pituitary gland (a neighboring small gland to the hypothalamus)
- To release the regulatory TSH (aka Thyroid Stimulating Hormone)

- Which in turn stimulates your thyroid (in your neck)
- To produce more T4 and T3 (or not produce by not stimulating)
- And gives feedback to the hypothalamus once again.

As shown above, you can view the actual TSH hormone like a messenger sent to knock on the door of your thyroid. If activity or illness increases your body's demands for assistance from your thyroid, the messenger will knock on the door a bit harder. If you have an excess of thyroid hormones when you don't need them, the messenger will knock much lighter.

But when your thyroid gland becomes diseased or disabled and fails to do its job adequately, the TSH knocks and knocks on the door, and theoretically, the TSH lab will show a consistently high number. Or, if the thyroid gland gets on its exercise bicycle and overproduces thyroid hormones (called hyperthyroid), the TSH lab will theoretically go low to indicate that the TSH in your body isn't knocking.

Yet patients have found the TSH lab to be a poor reflection of the reality of their thyroid condition, most especially for hypothyroid! Additionally, when a thyroid patient has the autoimmune thyroid disease called Hashimoto's, the TSH, just like the free T3 and free T4, can move all over the place in response to the die-off of the attacked thyroid hormones. And you're out of luck if you have your blood drawn during one of the low-normal swings of your TSH.

### **The creation of the TSH lab**

The TSH lab test was developed around 1973, using a base of select volunteers with no presumed history of thyroid disease to establish the "normal" range. Over the years, additional population studies have been done to support the range. The "normal" reference range is intended to represent the range of values for those in a healthy population without any presumed thyroid problem. The lowest and highest readings used to create the range are usually thrown out.

Dr. David Derry, a renowned physician in Canada, had been practicing medicine just two years when the TSH lab was

introduced. In an interview with thyroid patient Mary Shomon, he stated he was able to watch whether the TSH was in line with the onset of hypothyroidism. And he came to the conclusion that it was either quite slow to reveal it, or didn't at all<sup>10</sup>. Dr. Derry discovered exactly what we, as patients, have experienced for five decades—*the TSH lab result is thoroughly unrelated to how we feel!*

Does the TSH lab have a role when we are on thyroid medications? From the experience of patients, NO!

Sure, the vast majority of us have been dosed according to the TSH lab result. Our doctors have told us for years that because our result was in a particular place in the reference range, we were now on a correct amount of thyroid medications and adequately treated

But patients who have switched to desiccated thyroid have discovered that when they are allowed to dose by the complete elimination of symptoms rather than by lab work, they end up with a TSH value very below range...and not one hint of hyperthyroid. It is not uncommon to see a TSH of 0.009 or 0.004 when optimal, for example, yet not one iota of hyper, and no underlying problems with our hearts or of osteoporosis—the latter which uninformed doctors will declare.

Here is an example of lab work for an individual who had what appeared to be a very normal and optimal TSH. Yet, the patient made it clear that she continued to have hypothyroid symptoms of poor stamina, afternoon fatigue, hair loss and constipation. Additionally, when you view the free T3 and free T4, you will see the dead giveaway of the continuing hypothyroid condition, as both numbers are at the low end of each range:

- Free T3 2.65 (2.00 - 4.20 pg/mL)
- Free T4 0.89 (0.71 - 1.85 ug/dL)
- TSH 1.58 (0.35 - 4.00 uIU/mL)

The answer as to why the TSH lab can be so counter to how we feel lies in our tissues. Each of our organs will independently manage the amount of thyroid hormones which are received into its tissues via the conversion of T4 to T3 by enzymes, especially

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<sup>10</sup> [www.thyroid-info.com/articles/david-derry.htm](http://www.thyroid-info.com/articles/david-derry.htm)

the liver and the brain. In other words, though one organ achieves optimal T3 from conversion, another organ will not.

And the organ that is not getting enough T3 has no way to tell the thyroid that it needs more.

A report in 2005 from the Athens University School of Medicine<sup>11</sup>, stated it this way:

*Conversion of T4 to T3 is greater in the pituitary than in the liver, therefore it is possible that euthyroidism [without hypothyroid symptoms] in pituitary cells may co-exist with hypothyroidism in liver cells.*

And that discrepancy in your organs can explain why you may have some improvement in aches and pains when your TSH is normal, yet chronic low grade depression... and a potpourri of other continuing hypo- symptoms.

When Dr. John Lowe wrote his classic *Addenda to Four 2003 Studies of Thyroid Hormone Replacement Therapies*, he stated tissue responsiveness to thyroid hormone dosages can vary widely among patients<sup>12</sup>.

## Where the TSH lab can be useful

In spite of the worldwide patient experience with the TSH as a lousy test for hypothyroid diagnosing and dosing, there is one area where it can be quite useful: to discern pituitary function. Occasionally, a patient will have a very low TSH lab result with raging or classic hypothyroid symptoms, and that can point to a problem in the pituitary gland, which normally secretes the TSH hormone. This failure is called Hypopituitary.

Hypopituitarism is a condition in which your pituitary gland fails to produce enough or any of its important messenger hormones. This causes a domino-like downward effect in the health of your body.

Pituitary hormones include the TSH (which stimulates your thyroid to produce); the ACTH (which stimulates your adrenals to produce cortisol and affects your blood pressure); the FSH and LH (which influence the testes and ovaries in the production

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<sup>11</sup> [www.springerlink.com/content/y28n557300582h33/](http://www.springerlink.com/content/y28n557300582h33/)

<sup>12</sup> [www.drloew.com/frf/t4replacement/addenda.htm](http://www.drloew.com/frf/t4replacement/addenda.htm)

of testosterone and estrogen); the GH growth hormone (which promotes normal growth of your bones and tissue); the ADH antidiuretic hormone (which helps controls the water loss by your kidneys); and the prolactin hormone, which stimulates milk production and female breast growth. The condition has many causes, including an injury to the head, excessive blood loss (especially from childbirth or an injury), a disease in the gland itself, meningitis, or a problem with the hypothalamus, which is the organ that sends its hormone messenger to the Pituitary. I frequently note that those with a previous head injury develop hypopituitary later.

Treatment involves replacing hormones from those glands the pituitary fails to stimulate, or treating the underlying cause of the sluggish pituitary state.

## **Smoking and your TSH**

From a study done in Norway in 2006<sup>13</sup>, there is evidence that the stimulating effect of smoking can lower your TSH lab result. So if your doctor is still attached to the TSH lab, and you know you have hypothyroid symptoms, it may be wise to avoid smoking the day of your lab work if not the day before, as well as avoid second-hand smoke.

## **The bottom line about the TSH lab according to the experience of patients**

For the thyroid patient report card, it sucks. The TSH lab can be affected by too many variables. These can including an autoimmune attack on your thyroid (causing you to swing between hypo- and hyper), your daily hormonal ebb and flow, the weather, numerous medical conditions, or can just plan lag behind what is really going on with you for years. And, there are simply a large percentage of hypothyroid patients who have continuing hypothyroid symptoms with a TSH lab result in the “so-called normal” range.

Our recommendations to our doctors? Pay attention to our

symptoms first and foremost. Then use the free T3 and free T4, plus the two antibodies tests, as adjuncts to our clinical presentation of our hypothyroid! See Addendum C for explanations of thyroid labs.

The grandest use for the TSH lab test pertains to what it is: a pituitary hormone... no more, no less. And for that, the TSH lab is a good guide to reveal if you have a malfunctioning pituitary gland, especially if you have a very low TSH accompanied by raging hypothyroid symptoms.

For the prompt diagnosis of a thyroid condition, as well as finding the optimal amount of thyroid medications, patients give a resounding "Useless!" to the TSH lab.

***TSH Tidbits:***

- \* A TSH can be at its lowest around noon, and highest during the night.*
- \* TSH is a pituitary hormone, not a thyroid hormone, and can never reveal whether all parts of your body are getting enough thyroid hormones.*





# CHAPTER 5

## *Don't Ignore Your Adrenal Glands:*

### *The Monkey Wrench in the Works*

Just when you think you've gotten ahead of the game with your new knowledge about better thyroid treatment, a new stumbling block can rear its ugly head for many thyroid patients: *adrenal dysfunction, going from high cortisol, then mixed high and low, then low cortisol*. In fact, it's been my observation that more than 50% of hypothyroid patients may have an adrenal problem. And without discovering and treating that potential problem, you will be unable to benefit from your better thyroid treatment. Why? Because cortisol issues can block conversion of T4 to T3, besides closing the door to cell reception of thyroid hormones due to low cellular level of glucose with low cortisol.

### **Healthy adrenals and how they can turn on you**

Your adrenals are walnut-sized glands which sit atop your kidneys. Like your thyroid, they are cued into action by the communications from the hypothalamus to the pituitary gland to the adrenals (HPA axis). When your adrenal glands and HPA axis are healthy and strong, the adrenals have a powerful biological role of helping you cope with stress, whether physical, emotional, or mental. It's a process you may not even realize is going on, so you take it for granted. But they are like an invisible

knight-protector who's ready to absorb or squelch any stressful blows from life's dragons.

In response to stress, your adrenals produce two key hormones to help you cope: *adrenaline*, which plays a role in your short-term reaction to stress, and *cortisol*, which has a longer action and a variety of stress-busting roles. Cortisol is a "glucocorticoid" hormone. The "gluco" refers to the fact that it stimulates your levels of blood sugar (glucose) and the "corticoid" means it's released by the adrenal cortex part of the gland.

Your adrenals also produce *aldosterone*, which helps maintain your internal fluid balance and blood pressure, and the sex hormones testosterone and estrogen as well as DHEA and others. And key for thyroid patients, it's the adrenal hormone cortisol which helps all run smoothly.

Unfortunately, adrenals can fall off their horse and fail to help you. Below are four common scenarios which can result in eventual dysfunction of your life-giving adrenals and HPA axis:

1. Being on a T4-only treatment like Synthroid, Levoxyl, levothyroxine or other brands (*which leaves you hypothyroid, causes your adrenals to take up the slack, and eventually decreases the health of your adrenals which need T3.*)
2. Spending years being undiagnosed as hypothyroid due to your doctor's rigid dependence on the unreliable TSH lab with its dubious normal range (*same result as above.*)
3. Enduring long periods of chronic stress—biological, emotional, or physical (*which causes your adrenals to overwork, reserves to be depleted, and can be an additional burden if you also have the above two scenarios.*)
4. Eating improperly such as a high carbohydrate diet with low fat; consuming excess toxins in fluoridated and chlorinated water.

## The tell-tale signs of adrenal fatigue

One of the first clues that your adrenals are overly challenged, dysfunctional and/or becoming fatigued can be

a cluster of symptoms you've noticed before you even got on desiccated thyroid medication, or when you are trying to raise your desiccated thyroid:

- Anxiety
- Nervousness
- Not coping well with stress
- Impatience, irritability with others
- Feeling light-headed
- Shaky or trembling
- Dizziness
- Racing or pounding heart
- Trouble sleeping at night
- Nausea or feeling hot in the face of stress
- Hypoglycemia (low blood sugar)
- Sweating
- Salt craving; Sweet craving

Some patients with adrenal dysfunction may start on desiccated thyroid or T3 without an issue. But they can also notice fairly quickly, or after moving up on the dose, that something is not quite right--namely, symptoms that seem like an overreaction to your medication similar to feeling hyper. I'll never forget Julie, an author of children's books, who had a bad reaction when she reached 90 mg. She recounted:

*I sure was excited when I found out about natural desiccated thyroid. My eleven year use of Levoxyl had done practically nothing for me. Yeah it was a little better than before I started, but I still had problems. And my continued symptoms were affecting my ability to write, which of course my doctor said was because of depression. I also became a recluse, which really bothered my husband and son. And my friends weren't too pleased with that, either. When I first started on Armour, I had such hope! I did feel better. But on the day I was ready to raise to 1 ½ grains (90 mg), I became breathless and my heart*

*felt like it was going to beat out of my chest. I also had this strange tight feeling in my chest. And my anxiety was huge! I felt like I was going to crawl out of my skin.*

Julie's story is common to many patients who are started on desiccated thyroid with their doctors being clueless about their adrenal situation. Strange reactions occur, causing thyroid patients to think they are allergic to desiccated thyroid, or sensitive, or that it's not for them. Some experience it on lower doses; some on higher doses.

Another common scenario with adrenal dysfunction while on desiccated thyroid is a free T3 lab result high or over-range with continuing hypo- symptoms (thyroid hormone failure to get to the cells), or a high free T4 and low free T3 (with excess Reverse T3). In either situation, your clueless doctor thinks you simply need to lower your meds, or add more T4. i.e. your well-meaning doctor fails to put the adrenal puzzle pieces together.

## Patients putting it all together

Finally, as patients talked in groups, researched on the net, and talked to or read the words of the few knowledgeable doctors out there, light bulbs began to light in our brains about all the above. No more would we need to exclaim "*Desiccated thyroid doesn't work for me!*" or listen to doctors adamantly stating the same. We recognized that the strange problems we were experiencing before we started on desiccated thyroid, or after we started, were due to the highs and lows of stressed cortisol production and its bad effect on thyroid hormone assimilation.

Thierry Hertoghe, in *The International Hormone Society's Consensus Group statement*<sup>14</sup> states:

*The intolerance may come from over activity of the orthosympathic nervous system that often accompanies states of low cortisol, and an excessive and rapid conversion of thyroxin to triiodothyronine that puts these patients easily into a state of excess T3 and thus hyperthyroidism, and further increases the orthosympathic activity.*

But patient experience actually suggests that the symptoms are caused by an excess of adrenaline rather than just the high T3, followed by conversion to an excess of Reverse T3 and its problems with cell reception.

We could sum it up in two sentences: adequate or proper levels of cortisol are crucial when you start on, or are raising, desiccated thyroid or any product with T3. And without those healthy levels of cortisol, problems will ensue!

## Why some doctors haven't pointed out our adrenal dysfunction

When you look at the medical school training of the majority of doctors, you'll find out that the books accentuate Addison's disease or Cushing's syndrome—the extreme low and the overtly high of dysfunctional cortisol output. Addison's, named after the English physician who first identified the disease in an 1855 publication, is a progressive destruction of the glands and is most commonly caused by an autoimmune attack. Technically, you will see the term *adrenal insufficiency* used to describe the effects of Addison's disease.

On the other side of the coin, our adrenal problem is more aptly described as *adrenal or HPA dysfunction*, since it's more of a dysfunction or sluggishness than a disease process. It can also result in both high and low cortisol as well as cortisol resistance, all at the same time. Some can fall into Addison levels while others stay in an adrenal limbo. And our different, yet still highly problematic variety of an adrenal problem, has been missed by our doctors. In fact, it's most likely far more common and widespread.

Additionally, with our doctors' blind and zombie faith in T4-only medications and the TSH lab test, and their failure to give credence to our years and years of coping with continued hypothyroid symptoms, it has probably not even dawned on them what has been occurring. It's the blind leading the blind. If we do get a miracle and our doctors do prescribe desiccated thyroid, they even seem to miss what is written in the prescribing information for Armour by Forest Laboratories, for example:

## **Adrenal fatigue as an HPA dysfunction**

Though “adrenal fatigue” is a common term to describe a low cortisol condition, it may go deeper than it sounds. That depth was proposed to us by Dr. Kent Holtorf in his paper titled *Diagnosis and Treatment of Hypothalamic-Pituitary-Adrenal (HPA) Axis Dysfunction in Patients with Chronic Fatigue Syndrome (CFS) and Fibromyalgia (FM)* (Journal of Chronic Fatigue Syndrome Vol 14:3 2008). Holtorf suspects a sluggish HPA axis (communication from the hypothalamus, to the pituitary, to the adrenal glands) is the problem, even if the exact dysfunction is not known. Look at the HPA axis like a perfect human Rube Goldberg machine of chain reactions, which if not working properly, affects the healthy actions of other organs, including your thyroid, adrenals and sex hormones.

Bottom line, a significant body of thyroid patients find themselves with low-functioning adrenal glands, with the resultant low cortisol, complicating their hypothyroid condition.

## **Two kinds of HPA axis adrenal fatigue: Primary and Secondary**

Ongoing hypothyroidism because of T4-only treatment and the use of the lousy TSH lab test, plus chemicals, mercury fillings, nutritional inadequacies and chronic stress all contribute to what is called *Primary Adrenal Fatigue*, or the inadequate secretion of cortisol by your adrenals, in spite of normal or high levels of ACTH (Adrenocorticotrophic hormone) knocking on its door from the pituitary. (*Primary Adrenal Insufficiency* is the term applied to Addison's, usually from an autoimmune attack or even tuberculosis.)

*Secondary Adrenal Fatigue/Insufficiency* is the result of a failure of the pituitary gland to send the ACTH messenger, also called *Hypopituitarism*. It has a variety of causes, from a head injury, excessive blood loss, a tumor on the pituitary gland, and a viral implication... to having antibodies against the pituitary. It's usually detected when you have low cortisol or thyroid levels, and a low serum ACTH. In many cases, it can have no cure and require supplementation of the missing hormones for life.

*Thyroid hormone preparations are generally contraindicated in patients with diagnosed but as yet uncorrected adrenal cortical insufficiency...*

James L. Wilson, N.D., in his book *Adrenal Fatigue, The 21st Century Stress Syndrome*, further adds that in addition to their lack of training, medical doctors of today are constricted by medical licensing boards, the health insurance and pharmaceutical industries, and their patient's expectations of quick recovery<sup>15</sup>.

When a doctor does recognize the adrenal factor, he or she might describe the adrenal dysfunction experienced by hypothyroid patients as a "mild deficiency" since it's not as grave as Addison's disease with its autoimmune devastation of the adrenal cortex. The adrenal problem experienced by hypothyroid patients is a dysfunctional mix of too much cortisol some of the day, and too little at other times. And this causes innumerable problems that no patient would call "mild."

## **Other factors contributing to our adrenal fatigue**

As thyroid patients, we have also surmised that the excessive amounts of added fluoride and chlorine in the public water supply may have contributed to the cascade that leads to stressed adrenals. Fluoride, as a man-made chemical added to our water, toothpastes and certain foods and beverages is a known thyroid depressor, even used decades ago to treat *hyperthyroidism*. So our lowered T3 levels end up stressing our adrenals.

Additionally, who knows what effect the mercury in our vaccines and fillings, bromine in pesticides and foods, plastics in drinking bottles, and pollutants like PCB's and pharmaceutical residues which have leached into our water supply have played in the stress on our adrenals.

Repeated and extended periods of an excessively demanding life can further the stress on our adrenals as they attempt to help us cope. These stressors increase our nutritional needs, and those needs may not be met by our propensity to eat excessive carbohydrates.



## The full list of adrenal dysfunction symptoms

On the third page of this chapter, I listed tell-tale signs of having an adrenal problem. There are even more to consider. The following is a more complete list of actual low-cortisol symptoms reported by patients who had confirmed adrenal issues, whether primary or secondary, and many with mixed levels of high and low. And some of these symptoms, especially the shaky sensation, can be the result of the over-production of adrenaline by your adrenals in the presence of low cortisol:

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| <ul style="list-style-type: none"> <li>• continuing hypo- symptoms with a high free T3</li> <li>• shaky hands; internal feeling of shakiness</li> <li>• diarrhea</li> <li>• heart palpitations</li> <li>• feeling of doom or panic</li> <li>• irrational fear</li> <li>• general or localized weakness</li> <li>• inability to handle stress</li> <li>• inability to handle interactions with others</li> <li>• inability to focus</li> <li>• rage or sudden angry outbursts</li> <li>• emotionally hypersensitive</li> <li>• overreactive</li> <li>• highly defensive</li> <li>• feeling paranoid</li> <li>• exacerbated reactions to daily stress</li> <li>• no patience</li> <li>• easily irritated</li> <li>• mild to severe hypoglycemic episodes</li> <li>• taking days to recover from even minor stress</li> <li>• taking days to recover from a dental visit</li> <li>• flu-like symptoms</li> <li>• headaches (common with many)</li> <li>• all-over body ache</li> <li>• inflammation that doesn't go away</li> <li>• super-sensitive skin (hate to be touched)</li> <li>• extreme fatigue</li> <li>• scalp ache</li> </ul> | <ul style="list-style-type: none"> <li>• jittery or hyper feeling</li> <li>• clumsy (drop things, bump into things)</li> <li>• confusion</li> <li>• sudden extreme hunger</li> <li>• poor absorption of nutrients</li> <li>• hypersensitive to supplements</li> <li>• low stomach acid</li> <li>• low back pain</li> <li>• feeling dull</li> <li>• cloud-filled head</li> <li>• jumpiness or exaggerated startle reflex</li> <li>• muscle weakness</li> <li>• "air hunger"</li> <li>• dizziness</li> <li>• light-headedness</li> <li>• motion sickness</li> <li>• coffee putting patient to sleep</li> <li>• coffee needed in the morning to wake up</li> <li>• vomiting from running up the slightest incline</li> <li>• feeling nauseous from movement</li> <li>• almost passing out every time patient gets up</li> <li>• dark circles under eyes</li> <li>• waking up in the middle of the night</li> <li>• frequent urination</li> <li>• IBS symptoms</li> <li>• worsening allergies</li> <li>• feeling better after 6 pm</li> <li>• pain in the adrenal area</li> <li>• high estrogen levels</li> </ul> |
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*Patients have learned that it can be quite important to rule out sluggish adrenal function before starting on desiccated thyroid, or soon after we have started and notice any of the above symptoms. In fact, we find it important to rule out dysfunctional or poor adrenal function even if we haven't experienced any symptoms... yet.*

## **When you mention the adrenal angle to your doctor**

If you mention to your doctor that you seem to have symptoms of adrenal dysfunction, you will frequently be prescribed one of the following tests:

### **1. ACTH Stimulation Test, also called the Stim test:**

This measures your adrenal's reaction to being stimulated by the ACTH (Adrenocorticotrophic) hormone. The ACTH hormone is released by your pituitary to tell your adrenals to release certain hormones, just as the TSH is released by your pituitary to tell your thyroid to release hormones. The ACTH Stim is an excellent test to detect a problem with the ACTH, which in turn could diagnose Hypopituitarism.

But there are three problems with the Stim if you suffer from the typical primary form of adrenal fatigue by hypothyroid patients: first, the test uses a bell curve to spot abnormal cortisol levels, and it only considers abnormal function to occur in the upper and lower 2% of the curve, where you would spot Addison's disease or Cushing's syndrome. Second, the ACTH Stim measures the adrenals' ability to be "stimulated", not their ability to produce enough cortisol. So your adrenal fatigue can occur without being in these far ends of the curve, meaning your ACTH will look normal, and the doctor typically proclaims that you have no adrenal problem. Third, the stimulation you receive is about one hundred times more potent than you're ever likely to get from your own body, thus causing a response that your body would not produce on its own.

### **2. Blood Serum Cortisol Test:**

The one-time blood test can give you an accurate measure at the time of day your blood is drawn. Around 8 am, you are looking for a result near the very top of the range. Around 11 am to noon, you are

looking for a result in the upper fourth of, the range, even close to your morning result. Around 4 - 5 pm, you are looking for a result in the middle of the range or just slightly less. Just being “in range” is not your goal.

But the problem with a one-time test is producing the right amount of cortisol at one time of the day, and not at another. That’s common in adrenal fatigue. So if your result is where it should be, your doctor can potentially make a wrong pronouncement of “healthy.”

### **3. 24-Hour Urine Collection Test:**

This test involves pouring samples of urine into a collection container in a 24-hour period. Generally, you will urinate into your toilet first thing in the morning. After that, you’ll be collecting all your urine in the special container for 24 hours. The results then become an average of that day’s period, and can fail to tell you when you might be high or low, both of which can be common with adrenal fatigue.

### **4. An Overnight Metyrapone or Dexamethasone Test:**

Rarely used, but worth mentioning for understanding, the Metyrapone test discerns if you have an insufficient production of cortisol or a low reserve, and ascertains your pituitary gland’s ability to produce enough ACTH when your cortisol levels are low. The Dexamethasone test measures the response of the adrenal glands to ACTH. Patients are usually instructed to take the medication at bedtime with a snack, then testing occurs the next morning. Because most thyroid patients don’t have this kind of adrenal fatigue, these tests may not provide the information you need.

## **The best way to know if you have adrenal dysfunction**

At the beginning, we have found it wise to try a few self- tests which can be done in the comfort of your own home. The first is a set of questions to ask yourself, which I call Discovery Step One. The second are tests you can perform in your own home, called Discovery Step Two.

## DISCOVERY STEP ONE:

If you answer yes to any of these, especially two or more, you may have an adrenal problem:

1. Do you have a hard time falling asleep at night?
2. Do you wake up frequently during the night?
3. Do you have a hard time waking up in the morning early, or feeling refreshed soon after you wake up?
4. Do bright lights bother you more than they should?
5. Do you startle easily due to noise?
6. Do you take things too seriously, and are easily defensive?
7. Do you feel you don't cope well emotionally with certain people or events in your life?
8. Does it seem to take a long time for you to get over a stressful event?
9. Do you feel shaky, sweaty or nauseous when you need to eat?
10. Do you feel nauseous in the face of a stressful situation?
11. Do you seem to often crave salt?
12. Do you feel much better after 6 pm?

It's true that answering yes to some of the above can be due to other causes. Menopause, for example, can cause frequent nighttime wake ups. But when you start answering yes to more than two, you can suspect an adrenal problem.

## DISCOVERY STEP TWO:

With this step, you have three tests to choose from: a pupil, temperature and/or blood pressure test. If you only choose one, the temperature test gives excellent information for overall adrenal dysfunction. The pupil test is actually more indicative of low aldosterone, an adrenal hormone. Doing all three gives additional information. We are indebted to Dr. James Wilson, author of *Adrenal Fatigue: The 21st Century Stress Syndrome*, for inspiring us with the aldosterone pupil test as well as the blood pressure assessment in his highly recommended book, and to Dr. Bruce Rind of [www.drrind.com](http://www.drrind.com) for the temperature test.

- **PUPIL TEST (for aldosterone levels):** Stand in a darkened room in front of a mirror. From the side (not the front), shine a bright light like a flashlight or penlight towards your pupils and hold it for about a minute. Carefully observe your pupil. With adrenal fatigue (and particularly with low aldosterone, another adrenal hormone), your pupil will get small, but it will flutter and soon enlarge again or obviously flutter back and forth in its attempt to stay constricted. With healthy levels of aldosterone, your pupil should be able to constrict and stay small for at least a minute, even with very minor fluctuations. Some patients with known adrenal dysfunction can pass this test, since their aldosterone levels haven't yet been affected.
- **TEMPERATURE TEST:** You can determine your thyroid and adrenal status by taking your temperature three times a day, starting three hours after you wake up, and every three hours after that, to equal three temps. (If you have eaten or exercised right before it's time to take your temperature, wait 20 more minutes.) Then average them for that day. Do this for at least five or six days. If your averaged temperatures are fluctuating from day to day more than 0.2 - 0.3 °F (approximately 0.1 Celsius), with a lean towards 0.2, you need adrenal support. Dr. Rind's website<sup>16</sup> has a graph you can download. Here are the averaged daily results of a patient who had confirmed adrenal fatigue (plus poorly treated hypothyroid):

Tuesday: 98.0°F

Wednesday: 98.3°F

Thursday: 97.9°F

Friday: 98.4°F

Saturday: 98.0°F

Sunday: 97.9°F

As you can see from the above spread, there is a difference of 0.5°F from her lowest of 97.9°F to her highest of 98.4°F, implicating adrenal dysfunction.

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<sup>16</sup> [www.drrind.com](http://www.drrind.com)

On his website, which we highly recommend to understand temperature taking and graphing (<http://www.drrind.com/therapies/metabolic-temperature-graph#intro>), Dr. Bruce Rind, MD explains more: If it is fluctuating but overall low, you need more adrenal support and thyroid. If it is fluctuating but averaging 98.6°F, you just need adrenal support. If it is steady but low, you need more thyroid, and adrenals are likely fine.

**NOTE:** *The comparison of averaged daily temperatures is also an excellent method to know if you are on enough cortisol for your needs. You will need to wait five days after any raise of HC to start this. If the temps fluctuate by more than 0.2 - 0.3°F from each other, it's a clue that you need a raise of HC. Some patients prefer those temps to only be no more than .2 from each other.*

Patients have found that mercury thermometers are the most accurate, whereas most of the digitals are not. Digitals can become inaccurate from being dropped, having old batteries, or too much water exposure. Liquid metal thermometers were looked at as an alternative, but still weren't accurate enough.

If you use a mercury thermometer, leave it under your tongue long enough to get an accurate temperature, which is a least 5 - 7 minutes. Mercury thermometers can be found in online auction sites, from veterinary suppliers, and in antique stores if you are diligent. Broda O. Barnes, the author of *Hypothyroidism: the Unsuspecting Illness*, recommended measuring your temperature by placing the thermometer under your arm for 10 minutes, which can be ideal for the morning basal temp. But he also mentioned that it's about the same as doing the thermometer orally under your tongue. For patients, oral temperature taking is the preferred method for tracking your temps.

- **BLOOD PRESSURE TEST:** Take and compare two blood pressure readings—one while sitting or lying down and one while standing. Rest for five minutes in a recumbent position (sitting or lying down) before taking the first reading. Stand up and immediately take your blood pressure again. In those with healthy adrenals, the blood pressure will rise 10 - 20 points in its push to get blood to your brain. Or at the very least, it will stay the same. If the blood pressure is lower after standing,

it's a clue that your adrenals are sluggish. The degree to which your blood pressure drops while standing is often proportionate to the degree you're adrenally fatigued. We have learned that doing this test in the morning can reveal adrenal fatigue more readily than doing it in the evenings, but we encourage both times of the day, as one can be normal, and the other more revealing.

### **DISCOVERY STEP THREE:**

If you answer yes to some of the questions, or if the tests are suspicious, patients have found it far more beneficial to do a **24-hour adrenal saliva test**, which you can order without a prescription and do right in your own home. See Addendum D for a list of facilities that offer a home saliva test kit.

Testing your saliva has to be done without being on any cortisol medication or adrenal support supplements for two weeks to give a true picture of your adrenal function.<sup>17</sup> Women don't need to worry about their menstrual cycle when doing saliva testing for cortisol, unless they are also testing for progesterone at the same time, which would dictate testing on Day 21 of your cycle.

The beauty of the saliva method is that it tests your free and available cortisol levels, which blood testing does not, and is done at four different times of day, allowing you to view your daily cyclic adrenal function. Additionally, we have found that the results of saliva testing seem to correlate almost precisely to how we are feeling or symptoms manifested at those particular times.

When doing saliva tests, it can be helpful to drink plenty of fluids the day before. And on the day of the test, keep a lemon handy to sniff to help you produce plenty of spit. It generally takes up to 20 - 30 minutes to fill a vial<sup>18</sup>.

**IMPORTANT:** If also testing your thyroid, avoid taking your desiccated thyroid sublingually that day to prevent extra residue from mixing with your saliva. Additionally, even if you swallow your pill, you risk having a higher free T3, since T3 peaks about two hours after you take it. So we recommend that if you take your thyroid medication, swallow it immediately after the noon test, and swallow again right after the 5 pm test.

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<sup>17</sup> [www.macses.ucsf.edu/Research/Allostatic/notebook/FAQs-salivcort.pdf](http://www.macses.ucsf.edu/Research/Allostatic/notebook/FAQs-salivcort.pdf)

<sup>18</sup> For collection tips: [www.zrtlab.com/Page.aspx?nid=384](http://www.zrtlab.com/Page.aspx?nid=384)

If a situation prevents you from continuing to spit into the vials, you can freeze what you have done that day, and resume the next. Whatever happens, you will need to send your samples back the day after you finish *via overnight delivery*. If you fail to use the overnight delivery, you risk having your saliva deteriorate from slow delivery, giving odd results.

### **Specific advantages of saliva over blood test**

Cortisol levels can vary during the day, so saliva will test four key times at the minimum, generally 8 am, noonish, 4 - 5 pm and 11 pm to midnight, whereas a blood test is often once, or twice at the most. Some facilities test saliva six times, which includes late nighttime results. And there's a bonus with saliva—you don't need a prescription, and you can do it in the comfort of your own home.

Patients have found that some doctors have little knowledge about saliva testing, or they dismiss it. Granted, we have questioned saliva results for thyroid antibodies and female hormones—they seem odd at times. And if your saliva stays in the mail too long, you can get skewed results. But cortisol saliva results have always seemed to correlate with our symptoms of low cortisol and adrenal insufficiency. Thus, we can highly recommend it to other patients, and in turn, recommend that you take the results to your next doctor's appointment and explain the correlation between the results and how you feel.

Overall, the cost of an adrenal saliva test is reasonable. But if a person can't afford it or can't find one in his or her home country, yet strongly surmises sluggish adrenals based on answers to Discovery Steps One and Two, or based on the over-reactions to low doses of desiccated thyroid, it may be safe to experiment with cortisol support with your doctor's guidance, which is outlined in the next chapter. One word of caution: high cortisol symptoms can be similar to those of low cortisol, thus the strong emphasis to do the saliva test.



## Why saliva cortisol testing is the most important test you can do

Even when you are suspicious of an adrenal problem after answering the questions in Discovery Step One, or the tests in Discovery Step Two, patients have found it totally imperative to do the saliva test. Why? First, the symptoms of too-high cortisol can be similar to too-low cortisol, and the treatment is different. Second, because the next stage is a mix of highs and lows, it can tell you whether adaptogens, or over-the-counter adrenal cortex or plant based Isocort will do the trick in your treatment. Third, if your saliva reveals too-low results at all times of the day, you will know you need HC. See Chapter 6.

## Understanding your saliva results

Interpreting your adrenal saliva results goes beyond being satisfied with being “in range.” That’s why it’s good to compare your results to individuals who have healthy adrenal/HPA function. i.e. in healthy adrenal/HPA function, patients will have results like this:

*8 am: at the very top of the range to help you wake up refreshed*

*11 am – noon: in the upper quarter, but not quite as high as the morning*

*4-5 pm: midrange*

*11 pm-midnight: at the very bottom, such as 1 with a range of 1 – 4, to help you fall asleep*

## Additional adrenal-related tests to consider:

- **DHEA (which saliva testing often does)**
- **Aldosterone**
- **Potassium**
- **Sodium**

DHEA (Dehydroepiandrosterone) is secreted by the adrenal glands and is a precursor for testosterone in men and estrogen in women. It appears to have many benefits beyond those hormones. As cortisol goes up, DHEA goes down. When cortisol falls, DHEA makes a last ditch rise.

**Aldosterone** is an adrenal hormone that helps regulate your blood pressure and blood volume. It inhibits how much sodium is released into your urine and controls your electrolyte balance (sodium and potassium plus others). Hypothyroidism can serve to create low levels of aldosterone. If you also have low aldosterone in addition to your low cortisol, symptoms will include frequent urination at night and a craving of salt.

**Potassium and Sodium** levels can be affected by your aldosterone, as well as go low in the presence of hypothyroidism and digestive issues, so testing these two electrolytes are important. You might want to include magnesium, as well.

## **Choices for adrenal treatment**

The beginning of Chapter 6 will explain strategies to support healthy adrenals in the face of stress—herbs and vitamins and a change in lifestyle.

But when saliva results reveal the highs and lows, or all lows, of adrenal dysfunction or fatigue, more may be needed, ranging from the use of herbal adaptogens, to licorice root, to over-the-counter adrenal cortex or Isocort. When there is more seriously low cortisol across the board, patients have met success with using the T3 Circadian Protocol, or prescription hydrocortisone (HC)—the latter applicable for those who have hypopituitary or are unable to benefit from early-morning T3.

## **Why HC (hydrocortisone) may be needed**

For those who find themselves with serious low cortisol across the day's saliva results, and are unable to use the T3 Circadian protocol for adrenals (see Chapter 6) the use of prescription cortisol called hydrocortisone (HC) is needed to replace what isn't there.

Can it be difficult to find a doctor who understands treatment of serious adrenal fatigue with cortisol? Definitely. But they can be found. And it's crucial to do your research and present your information well about the large body of hypothyroid patients who have this condition, and how it's treated. At the very least, it's a good strategy to find a doctor who is open-minded enough to let you take the lead based on your knowledge, while guiding you.

## Controversy

If cortisol is needed, note that it has a history of overuse with serious side effects. That fact seems to cause a knee-jerk reaction of negativity by medical professionals about its use. But as Jeffries stated in his book *Safe Uses of Cortisol*: “Cortisol is a normal hormone, essential for life”. And in this case, the treatment strategy with cortisol is with physiologic doses, not the large pharmacologic doses we once saw in the past. Physiologic refers to doses which replace, resemble or promote normal functioning, whereas pharmacologic refers to extremely high doses.

When cortisol in the form of hydrocortisone (HC) is used to replace what your adrenals are not providing, some information and individuals will claim that 20 mg of HC is a full replacement dose, and if you go any higher, you are risking permanent suppression of your adrenals and the HPA axis (i.e. the communication between your hypothalamus, pituitary and adrenal glands). Yet others will state that the full replacement can be much higher, such as 40 mg at the minimum. So the question remains: how much is too much?

What doctors and their patients who have adrenal dysfunction have discovered is that for many, staying with a cookie-cutter, one-size-fits-all amount like 20 mg or less simply doesn't adequately get thyroid hormones to the cells, no matter what studies and research implies. Temperatures can still be unstable, adrenaline is over-produced, and symptoms of low cortisol usually still persist. 20 mg may be a physiologic (beneficial) dose for some, but not for others. In fact, it's common to see optimal HC amounts from 27.5 to 35 mg and occasionally higher, especially with men.

One important aspect that critics of these higher doses miss is the prevalence of digestive issues from one's hypothyroidism. Having problems with malabsorption is not uncommon—the failure to absorb from your GI (gastrointestinal) tract, and most specifically your stomach and/or intestines. The symptoms of an absorption problem may be silent, or you may have diarrhea, bloating, gas, reflux or discomfort. Thus, to achieve the same stabilization of temperatures as someone without digestive issues, adrenal patients can need more HC and sea salt, plus digestive aids such as Betaine HCL or one tablespoon apple cider vinegar in water.

Another fact missed by critics is the greater biological endogenous cortisol production by men vs women, i.e. men usually need higher supplementation amounts of HC to combat their adrenal dysfunction.

### **When higher doses aren't doing the trick**

Some patients will find themselves at the higher doses of HC and still have fluctuating temperatures and problems. The next step can be to move the dosing schedule to 3 hours apart rather than 4. So, if you were on a dosing schedule of 8 am, noon, 4 pm, and bedtime, you may need to try can try 8 am, 11 am, 2 pm, 5 pm and close to bedtime.

Next, problems finding stable temps can point to a low aldosterone problem. This is covered in the next chapter.

Or a few patients who have good aldosterone yet continued instability switch to Medrol (Methylprednisolone) with their doctor's guidance, a longer-acting version taken twice a day. They will use HC to stress-dose. But most prefer to stay with HC for the main treatment.

### **The span of adrenal support**

For the majority of hypothyroid patients with adrenal dysfunction or fatigue, treatment is not meant to be for life. But for some, it can take a few months, even a few years before all other issues are treated and adrenals are strong enough to succeed in a slow wean.

Additionally, HC treatment needs to be enough to take the stress off the adrenals, to stabilize one's daily averaged temperature from day to day, to build your reserves over time, and to allow thyroid hormones to adequately make it to the cells because of better cellular glucose levels.

For those with secondary adrenal fatigue, or low cortisol production from a pituitary or hypothalamus problem, cortisol supplementation may go on for life. But you may be able to lower your cortisol somewhat after initial treatment.

If you have **primary** adrenal fatigue and the weaning fails, the problem may lie in one of four areas: first, you didn't raise high

enough to stabilize your temperatures; second, even if you did find stabilization of temperatures, you didn't fully correct your hypothyroid state or you didn't hold the ideal amount of HC long enough for resting of the adrenals; third, you weaned far too fast; or fourth, you have an underlying, undiscovered and untreated condition such as low B12, low ferritin/iron, chronic inflammation, Lyme disease, and more--all which need treatment.

When you do wean successfully, it can be helpful to support your newly-recovered adrenal function with daily high dose Vitamin C, B-vitamins, minerals and herbs, plus stress-dose in the face of high stress events. If you need to stress dose more than 1-2 times a week, you were not ready to come off the HC, say many patients.

You're not alone if you find you can't seem to tolerate desiccated thyroid, or have issues when you try to raise your dose. The corner will be turned when you recognize the problem, and treat your adrenal dysfunction.

### ***Adrenal tidbits:***

- \* Internal shaking can be low cortisol; hand trembling is usually high cortisol.*
- \* Headaches can be from low or high cortisol, as well as low sodium.*
- \* Having a good sleep schedule and avoiding most any exercise is important when treating stressed adrenals.*
- \* Females may not have stable temperatures during ovulation.*

# CHAPTER 6

## *How To Treat Your Adrenals*

Adrenal health is paramount for thyroid patients, and supporting them even when they are functioning well is wise. But when the adrenals are found to be dysfunctional, proper treatment is equally important.

This chapter presents two of those strategies: one for those who have healthy adrenal function, but which could use support, and second for those who find themselves with a mix of high and low cortisol, or all lows, and a failure to remove their hypothyroid symptoms when they raise desiccated thyroid. This would be important information to share with your doctor and use in that relationship.

### **Adrenal Game Plan #1: for those with healthy adrenals which need support in the face of life stress**

If saliva lab results or symptoms do not show an adrenal problem, yet you know your adrenals may be challenged by emotional, biological or physical stress and could use support, there are a variety of strategies patients have used to assist adrenals and keep them strong. This can also be helpful for women who are going through the hormonal changes of perimenopause and early menopause. It's also highly recommended that you communicate with your doctor if you are trying these over-the-counter methods.

**One important note:** *patient experience has repeatedly shown that these strategies are not enough if saliva results prove a dysfunctional mix of lows and highs, or all lows, in your cyclic cortisol levels and proven by a 24 hour adrenal saliva test, plus the inability to use desiccated thyroid or T3. Adrenal Game Plan #2 will need to be discussed with your doctor and implemented.*

## **1. Vitamin C, all Vitamin B's, herbs, etc**

Your adrenal glands, especially the cortex and medulla, have the highest amount of Vitamin C in your body. That may explain why I, as author of this book, never fell into adrenal fatigue, even though I suffered extreme and constant stress on T4-only meds. I was always taking high dose Vitamin C all those years. Thus, it may be wise to make sure you are getting adequate amounts of this important vitamin in your diet to support the function of your adrenals. Recommended amounts vary from 1000 mg to the amount you can tolerate before getting loose bowels.

The B-vitamins are also crucial for optimal adrenal function, and it's recommended to find a good balanced B-complex formula. They should include B1 (thiamine), B2 (riboflavin), B3 (niacinamide), B5 (pantothenic acid), and B6 (pyridoxine), B12 (cobalamin), with special emphasis on B5 and B6. B-vitamins are well-known for their ability to counter the effects of stress. Plus there is evidence that diet alone is not giving us enough of our B-vitamin need.

James L. Wilson, in his excellent book *Adrenal Fatigue: the 21st Century Stress Syndrome*, also recommends adding the following to your C's and B's: Vitamin E, magnesium, calcium, trace minerals, fiber and certain herbs like the licorice root, plus Ashwagandha Root and Leaf, Korean Ginseng Root, Siberian Ginseng Root, Ginger Root, Ginkgo leaf. All of the former herbs are considered adaptogens, meaning they appear to have properties which help you cope better with stress and potentially lower high cortisol, or even out a mix of highs and lows.

Rhodiola Rosea is also a popular herb, as well as adaptogen, used to counter the effects of stress and prevent adrenal burnout. Patients report that even one dose lowered their stress, and high cortisol.

## 2. Laughing and enjoying your life

Your attitude towards your life can play a unique role in the continued health of your adrenals. For example, the simple pleasure of laughing is said to stimulate your adrenals in a positive way, and may increase the parasympathetic supply to the adrenals.

In fact, laughing is so healthy that it can even reverse some serious illnesses, as Norman Cousins experienced and explained in his book *Anatomy of an Illness*, which I highly recommend. I remember a stressful time in my past that I consistently and purposely watched every episode of America's Funniest Home Videos—a uniquely funny television program which gave me great joy and always some belly laughs.

Another beneficial recommendation is to *slow down* and enjoy your life. No adrenals enjoy a body that goes-and-goes- and-goes as if there's no end to the going. What adrenals do love are those times each day that you stop and smell the roses. The roses can include anything that is relaxing and enjoyable. Even meditation and yoga can promote an inner joy that will help your adrenals.

This strategy can also mean to change the stressors in your life, or at the very least, change the way you deal with them. Your adrenals appreciate an attitude of either *"I'm going to remove this particular stress from my life"*, or *"I'm going to accept what I can't change, and find joy around it."*

If you take your breathing for granted, don't. Take purposeful moments to take in a deep breath, hold, and release, which can break that cycle of stressful coping. In fact, do it right now and notice a renewed feeling of calm.

## 3. Sleeping and rest

Your body has a healthy and beneficial natural rhythm, with your cortisol at its highest in the morning—around 8 am or earlier—to help wake you up and get you going... to the lowest in the late evening to help you fall asleep.

So, the worst thing you can do to your adrenals over time is ignore your body's strong hints in the evening to go to bed. Carla explained:



*I must have my Dad's genes, because I simply hated to go to bed at night. I resented putting down my sewing simply because my body wanted to sleep. So I fought it regularly, not going to bed until 2 am when I could. But I noticed that I became more and more tired during the day, and I felt stressed. So I finally decided to give in to my body, and go to bed when it was telling me to, which seemed to be by 11 pm. Yeah, I resented it at first, but I then started to feel a lot better. And to make up for going to bed on time, I found myself with better mornings to get back to my sewing.*

#### **4. Eating frequent small meals with wise food choices**

As much as supplements can be beneficial, there is no substitution for what you receive in real food, such as quality protein, vegetables, whole grains rather than refined and in moderation, healthy fats and oils, and low glycemic fruits like berries. Food, especially raw foods, give us the most natural form of vitamins and minerals, fiber and phytonutrients. Phytonutrients are those compounds which help fight cancer and promote good health, including the carotenoids (that which makes a fruit or vegetable colorful, such as carrots), isoflavones (found in peanuts), or flavonoids (the red color of fruits). Flavonoids are also found in teas, but unfortunately, so is more fluoride.

On the other side of the coin, certain foods act as stimulants, and your adrenals react. Those foods include excess sugar, simple carbohydrates, and even caffeine. Additionally, excess sugar and carbohydrates can lead to insulin resistance due to excess insulin, and more stress on the adrenals.

Another good strategy with the food you eat is to choose several small meals rather than two or three large ones. This helps to keep your blood sugar levels steady and is less stress on your adrenals, as is adding good protein to each meal.

#### **5. Keeping exercise beneficial rather than over-stimulating**

The more intense your exercise routine, the more taxing on your adrenals, i.e. cortisol is needed and released in proportion to the intensity of your exercise routine. And if you are stressed, your adrenals are under a lot of demand. Thus, light exercise can be more beneficial, especially in times of stress.

## **6. Avoiding alcohol**

Unfortunately, the very substance which you may want to grab to cope with stress is actually the most toxic thing you can do to your adrenals. Several research studies reveal that alcohol not only signals the adrenals to produce even more cortisol, but can severely raise your adrenaline levels.

In other words, alcohol consumption can cause the very problems to your adrenals as does emotional or situational stress! Even worse, if you stop drinking, the withdrawal state can continue to promote stress on your adrenals. It all becomes a vicious cycle.

The solution is in finding more healthful ways to cope with stress other than reaching for alcohol. Recommendations include looking for activities which give you pleasure and positive distraction, such as a favorite hobby, baking, a good movie, comfortable exercise, or even a mix of carbonated water and lemon juice.

## **7. Quality over-the-counter adrenal support**

Direct support of your adrenals in the face of chronic stress can be found with good OTC (over-the-counter) adrenal support supplements from your local health food store. Many of those products contain raw adrenal glandular, which is helpful. But you do have to be careful of the adrenaline in raw adrenal glandular.

Another alternative without unnecessary adrenaline are those adrenal supplements made solely from the adrenal cortex. One brand called Isocort by Bezwecken was always popular with patients because it was exclusively from the adrenal cortex of New Zealand sheep. But by early 2011, Isocort was changed to a fermented plant-derived cortisol. Fortunately, there are many successful chemical substances made from plants on the market. As a plant-derived cortisol, it may be workable if your adrenal dysfunction is minor.

According to the makers of Isocort, this support product still contains Echinacea, as Echinacea Purpurea (6 mg per pellet). It also contains Lactose, Magnesium Stearate, Starch Arrowroot, Maltodextrin, Microcrystalline Cellulose, Magnesium Silicate, and Lactase. The cortisol amount of each pellet should be low, such as 1.5 mg rather than the 2.5 formerly stated.

## **Adrenal Game Plan #2: for those who have dysfunctional adrenal/low cortisol**

Though many patients find that the above strategies are helpful to keep *healthy* adrenals strong, patient experience reveals they usually aren't enough when one's adrenal function has started to dip into low cortisol as revealed by a 24-hour adrenal saliva test.

### **Using over-the-counter adrenal support**

When patients find themselves with adrenal stress as revealed by saliva testing, such as a mix of high and low cortisol during the daytime or evening, the first strategy is in using adaptogen herbs to help the body even out its response to stress. Examples include Ashwagandha, Astragalus, Rhodiola, Schisandra and other herbs, plus certain mushrooms like maitake, reishi and shiitake. These are used for several weeks or a few months while treating what is causing the stress.

Or, if patients discover they have mostly a few low cortisol areas, they might start on a product like Isocort, an over-the-counter plant-derived cortisol, or any quality “adrenal cortex only” product with its inherent cortisol content. Unlike “adrenal glandulars”, cortex contains no adrenaline, which would have an affect akin to kicking a sleeping dog.

All in all, patients are looking for the most effective way to treat their cortisol issues, which in turn makes thyroid meds work better, without going on prescription meds.

### **When saliva results reveal a more serious low cortisol problem**

There are two strategies patients and their doctors can consider when saliva reveals problematic low cortisol.

**1. Using T3 Circadian Method:** UK Thyroid patient Paul Robinson discovered something quite fascinating—that poor adrenal function could be related to poor adrenal tissue levels of T3. And one could bring back better function by a unique way of using T3-only or desiccated thyroid. And it worked! He

qualifies that you have to be treating diabetes or other blood sugar regulation issues, and be free of hypopituitary or Addison's disease to make this protocol work.

Important general points are as follows:

1. Most of the day's cortisol is made by one's adrenals in the last four hours of sleep before waking up. For example, if one naturally wakes up at 8 am, that window would be 4 - 8 am, with 8 am representing the peak of cortisol production. And since adrenal cells need T3 (as any cell in your body would), giving oneself T3 strategically in that 4-hour window would be key to promoting far better adrenal function.
2. One's first T3 dose of the day, such as 5 – 15 mcg, is usually started about 1 – 1 ½ hours before one wakes up for the day, held a few weeks while watching daily blood pressure, pulse and temperature. Then it's moved up earlier by half an hour, held, and data repeated. The goal is looking for the time in that four window when the adrenals seem to kick in the best, as shown by temperature, blood pressure and heart rates which return to normal or better function. Many find the most idyllic time within the first 1-2 hours of that 4-hour window, though you gradually arrive to it. If good adrenal response is not found, the process is repeated with an increase of 5 mcg of T3.
3. If a particular time gives too much of a response, one puts the T3 later again by half an hour.
4. Better adrenal response will be seen within weeks, and the best by three months, if the protocol is done correctly, while other T3 doses are continued throughout the day.

Robinson underscores that one will need to be on a good B-complex, B12, Vitamin C several times daily, Vitamin D, a good chelated multi-mineral, and chelated magnesium.

If someone tries this while on HC (details below), Robinson feels it's best to try and reduce HC as much as possible, and try small (2.5 mg) decreases every few weeks while on the protocol. He also feels it's important to do an ACTH Stim test to confirm that the adrenals are capable of responding to the early morning

T3 doses. Finally, direct T3 is needed instead of slow-release T3.

Will the T3 Circadian Method work with desiccated thyroid? Yes, say some patients who have tried it, since desiccated thyroid contains direct T3.

In Robinson's book, *Recovering With T3: My Journey from Hypothyroidism to Good Health Using the T3 Thyroid Hormone*, chapter 16 gives good details about the use of T3-only for better adrenal function. You can order it from here: [www.stopthethyroidmadness.com/books-on-thyroid](http://www.stopthethyroidmadness.com/books-on-thyroid).

**2. Using prescription hydrocortisone:** A different step for problematic low cortisol levels is to talk to your doctor about treatment with a physiologic, multi-dosed amount of prescription hydrocortisone (HC), or the therapeutic amount that safely gives you back what your adrenals are not. This amount, in turn, allows thyroid hormones to finally interact with cells due to increased internal blood sugar levels.

The most well-known corticosteroid brand of HC is called Cortef by Pfizer Laboratories. It's a bioidentical pill form and is considered a rapidly absorbed, man-made chemical form of cortisol. It comes in a pill amounts of 5 mg, 10 mg and 20 mg. Cortef fillers include calcium stearate, corn starch, lactose, mineral oil, ascorbic acid and sucrose.

The dose amount that has repeatedly shown to work best for most patients is approximately 25 - 35 mg of cortisol (and often higher for men), which according to Dr. William McK. Jeffries in his book *Safe Uses of Cortisol* 'takes the strain off of the residual adrenal tissue and provides for more functional reserve in times of stress'. It's also called a physiologic dose rather than the high pharmacologic doses with their overriding side-effects that were once used widely in the mid-20<sup>th</sup> century. Because of digestive issues common to those with hypothyroidism, a few patients have found they can need 35 - 45 mg or higher. It's all based on doing one's Daily Average Temperature, as explained in Chapter Five.

Your optimal amount of HC is meant to be multi-dosed to more closely match the normal rhythm of your natural secretion. Example is below under the heading *Starting Cortisol Amounts*.

When seriously low cortisol is proven by the results of a 24-hour saliva test, many patients find that starting on (rather than raising to) approximately 25-30 mg can be helpful to see if it will fully support fatigued adrenals. This adequate support will be evidenced by doing the daily averaged temps as explained in

Discovery Step Two in Chapter 5. We also notice that some need at least 30 - 35 mg at the minimum before adrenal fatigue symptoms are removed, temperatures stable, and thyroid hormones interact with cells.

When patients find their individual optimal amount of HC, they will note their daily averaged temperatures aren't fluctuating anymore (because the thyroid hormones are now getting to patient's cells.) Desiccated thyroid, or T3-only, will usually still need to be raised.

**NOTE TO MEN:** *Since men secrete more cortisol than women, they often need more cortisol support. For example, where a female may end up needing 25-35 mg of cortisol in order for thyroid hormones to fully reach the cells and temperatures stabilize, a male may need 35 - 45 mg. In fact, it's not uncommon to see most men in the latter range before optimal. It's individual, but just as with women, you will know when your daily averaged temps stop fluctuating more than 0.2 - 0.3°F from each other (see Discovery Step Two in Chapter 5).*

### **Starting cortisol amounts: (a major change from the First Edition)**

When patients and curious doctors were first learning about cortisol dosing, there was an emphasis on *slowly raising* to 20 mg and dosing 4 times a day to better replicate what the adrenals would be doing. This slow ramp up was not only in Dr. Barry Peatfield's book (*Your Thyroid and how to keep it healthy, Ch. 8, pg 122*), but adrenal patients supported the slow ramp up, as well.

But patients discovered, by observation and their own miserable experience, that though the dosing schedule was correct (highest in the morning, then every four hours), slow ramping up caused very uncomfortable adrenaline surges and a shutting down of the HPA axis (hypothalamus-pituitary-adrenals) in response to exogenous cortisol. Some patients would freak out, thinking they were doing something wrong.

Eventually by researching and talking to knowledgeable doctors, patients and wise doctors came to the conclusion that "starting on" 20-25 mg minimum works far better (if your free T3 isn't high in the range) and the problems from the slow ramp-up completely ended. i.e. lower doses can *suppress* more than they are *replacing* when your cortisol is too low, and you end up with

uncomfortable adrenaline surges.

This was proved over and over by new patients sharing in patient groups who convinced their doctors to let them treat their low cortisol with a starting total dose spread out 4 times day and instead of ramping up.

So patients are dosing similar to this, and with food each time to protect the stomach lining:

*Starting on 20 mg (for less serious low cortisol)*

7.5 mg first thing in the morning

5 mg four hours later

5 mg four hours later

2.5 mg four hours later or at bedtime preferably

*Starting on 25 mg (for most patients with challenged adrenals)*

10 mg first thing in the morning

7.5 mg four hours later

5 mg four hours later

2.5 four hours later or at bedtime preferably

*Starting on 30 mgs (for men or those with more serious low cortisol)*

10 mg first thing in the morning

10 mg four hours later

5 mg four hours later

5 mg four hours later or bedtime preferably

The 4-hour dosing spread is important for three reasons: first, it provides a more steady dose of HC since cortisol levels will fall approximately 50% (its half-life) within 1½ hours; second, no dose is so high that it turns off your own production later on in the day; and third, it better replicates your own cortisol rhythm, which gives you more cortisol in the morning, and subsequently smaller amounts during the day. Some may need to space the doses every three hours rather than four if they find themselves flagging before the next dose. Others may need to add a small interim dose, which is easy to drop later.

## **Maximum individual dose of 10 mg**

By trial and error, wise doctors and adrenal patients discovered that for most, going *no higher* than 10 mg in the

morning dose is important (or subsequent doses), since higher doses can shut down the ACTH too much. ACTH is the hormone secreted from the pituitary gland meant to regulate adrenal production.

If a dose is at 10 mg, and patients note they seem to run out of cortisol before the next dose, they will bring the next dose up to a 3-hour span, or add an interim small dose in between.

## **Nighttime dose**

Since many adrenal patients can find themselves waking up in the middle of the night from their low blood sugar (hypoglycemia) and subsequent adrenaline surges (and having seriously low morning cortisol can predict it), a solution has been to take a small dose of hydrocortisone at bedtime, with food to protect the stomach lining, to prevent the glucose lows during the night and problems with waking up.

Taking your final dose right before you lay down results in a slower breakdown and release during the night. Dosing with 2.5 at bedtime is common. Or if waking up still occurs, 5 mg at bedtime has worked for some patients. Some have even used 2.5 of HC when they are jolted awake in the middle of the night.

Not everyone tolerates a bedtime dose, especially if you have high bedtime cortisol, by the way. If a bedtime dose causes problems with sleep, patients will move it back into a daytime dose, and treat proven high bedtime cortisol differently. Treating high cortisol is explained later.

## **Men and HC dosing**

Since males will usually need more HC than females, here's a example dosing schedule for a man needing 37.5 mg HC. You will note that it resembles one's circadian rhythm with highest in the morning and lowest at bedtime, and is three hours apart. If 40 mg was needed, the bedtime dose could be 5 mg, for example. Some men need even more, but you'll know by doing your daily averaged temps (Discovery Step Two).

8 am (or upon your waking time): 10 mg

11 am: 7.5 mg

2 pm: 7.5



5 pm: 5 mg

8 pm: 5 mg

Bedtime: 2.5

## **Finding the right amount of HC**

Once you have held your starting dose of HC, or a raise, for at least five days, you will want to do the Daily Average Temperatures as explained in Chapter Five in Discovery Step Two. It's the steadiness of your daily averaged temperatures that will reveal if you are on the right physiologic amount for your needs and the improvement of your health and thyroid treatment. Too low or too high levels of HC cause instability.

If your starting dose is not stabilizing your temperatures, check with your doctor about raising the noon dose by 2.5 mg, hold several days, then check your temperatures (daily averaged) for at least five more days, and see. If you need another raise, it can then be added to the afternoon dose. Again, it can be wise to keep the morning dose no larger than 10 mg to avoid shutting down the ACTH later.

Once you achieved stable temperatures, you can work to raise your thyroid until you have a good blood pressure, heart rate and afternoon temp close to 98.6.

How to know if you are on too much HC? Watch for these symptoms: excessive sweating, a larger increase in weight, easy bruising, weakness, facial redness or roundness, fluid retention, hump on back or even mood swings. An excess amount can also weaken your immune system, resulting in an increase in illnesses.

## **Cortisol brands**

At the publication of this book, there are a variety of hydrocortisone meds. By the reported experience of some patients, the strongest are both Merck, Sharp and Dohme's hydrocortisone made in the UK, as well as Pfizer's brand name of Cortef. Douglas and Glades have been successful with patients, as well.

## **Why you can't use saliva testing while on HC**

Unfortunately, you cannot use another saliva test to ascertain if you are on the right amount. The manual exogenous addition

of cortisol, with its highs after dosing, then lows from its short life, skews the results. The most accurate way to know when you are on enough is via comparing the daily averaged Temperatures. (See Chapter 5/Discovery Step 2/Temperature Test.)

## **When you are already on desiccated thyroid as you start using cortisol**

If you discover your low cortisol condition after you've already been on desiccated thyroid, you may have a high Free T3, so talking to your doctor about doing a FT3 lab is a good idea. If it's high, patients have lowered their thyroid, which in turn will lower the high Free T3, before starting on HC. This will prevent the uncomfortable adrenaline surge caused by the movement of the pooled thyroid hormones to the cells. Don't be fooled into thinking that the dump of T3 from your blood to your cells is easy to ride. It can feel quite uncomfortable with extreme anxiety, racing heart, and/or other assaulting adrenaline symptoms that can last for days. If this happens, even after decreasing desiccated thyroid, doctors have guided their patients to stop desiccated thyroid completely for a day or two or more, then either slowly raise back up, or even better, get on straight T3 only since most will tend to have too much RT3.

How much do you decrease your desiccated thyroid? If you are higher than one grain, withdrawing your dose down to one grain or less is prudent when you first start on HC. If you have been on Synthroid or any other T4-only treatment, you probably won't have a free T3 high enough to worry about since it's not direct T3, but T3 from conversion.

## **Why T3-only may be a better with HC**

Unfortunately for many adrenal patients, having the dysfunctional highs and lows of cortisol production, just like having low ferritin/low iron, can cause a build-up of Reverse T3 from the T4 conversion in desiccated thyroid, which in turn, lowers your FT3 levels, making your situation worse. You can know you have too much RT3 when you never can seem to find a sweet spot in how you feel, feeling very hypothyroid yet hyper symptoms, or a high Free T4 with a less-than-optimal free T3.

You can also compare your Free T3 and RT3 ratio as explained in Chapter 12, where you are looking for a free T3 ratio which is at least twenty times higher or more than your RT3.

One way to stop the excess RT3 production is to remove T4 from the equation, which desiccated thyroid has, and to start on T3-only in low doses, and raising in low amounts. It appears to take up to 8-12 weeks to fully clear excess RT3. You will also end up staying on T3-only until you have held your HC treatment for awhile as well as corrected any issues which were causing the high RT3 in the first place. A few feel they may need to stay on T3 for life.

## **Raising thyroid while on HC**

Raising one's HC enough to find steady temps is a good time to start raising one's thyroid medication, say many patients who have walked to path. If one's adrenal fatigue is severe, there may be a need to stress-dose with an extra amount of HC with each raise, such as 2.5 for a few days, or wait for stabilized daily averaged temps before raising.

Patients with their doctors have learned to continue with daily averaged temp comparison as a way to ascertain if and when you are on enough HC. See Discovery Step Two in Chapter 5.

## **How to avoid stomach problems with HC**

As a precaution, patients have learned to take HC with food to protect the stomach lining, which includes the bedtime dose. Some patients report nausea or stomach upsets when taking hydrocortisone without food.

Very rarely, some patients will have a hard time tolerating HC, even with food. The clue is having a reaction within an hour after taking HC. The potential solution is to cut the dose in half, taking the smallest amount you can, and raising much slower. Or, look for enterically coated tablets. Hydrocortisone cream rubbed into your skin, rotating the areas, is another method.

You can also take HC sublingually, but will need to watch for potential signs of thrush, which would be candida in your mouth

and looks like velvety white lesions in your mouth or tongue. This doesn't happen to everyone.

## The use of Hydrocortisone Cream

Though messy, some patients and their doctors report the successful use of 1% HC cream in the treatment of their low cortisol issues. It's especially helpful when the use of oral HC was simply too hard on one's stomach lining, even with food. The 1% hydrocortisone cream contains approx. 10 mg HC per ¼ tsp. A dosing syringe can be helpful and can be found at your local pharmacy. Find the measurement for 1 ml or 1 CC on the syringe, which will also equal 10 mg HC.

Even better, some patients simply use the cream for stress dosing. It's also important to rotate the places you put it on your skin, since long-term use is known to thin skin.

**Interesting note:** *one patient who had problems with HC hurting her stomach discovered that taking Slippery Elm Bark helped her tolerate the HC in her stomach.*

## Licorice Root

Sometimes, one's saliva results will show slightly lower levels of cortisol in the morning only, or both early and later morning i.e. your adrenals are showing very minor fatigue. If you do not have high blood pressure (which it can exacerbate) and are not on diuretics, licorice root with its Glycyrrhizic acid is a natural support of your adrenal glands since it slows and can inhibit the breakdown of cortisol in your liver.

Recommended amounts of this herb are based on your response, or around 300 - 500 mg per day. Some recommend up to 900 mg a day. Since there are no studies showing the safety of licorice root after 6 weeks, some may choose to do a two-week break and use a different support. It's not recommended if you are pregnant, have kidney or heart disease, or diabetes. A few patients report a pounding heart and headaches while on licorice root, even though blood pressure did not rise. Others do fine. You may not want to be on it long-term.

Licorice root can be used with HC in some situations for its aldosterone-like mineral corticoid effects, and can be helpful

when you are weaning off HC.

Sandy, who found herself with symptoms of adrenal fatigue, but couldn't afford the saliva test, states:

*I knew I had an adrenal problem, because I had a terrible time coping when my children needed this or that, and I'd get nauseous at the drop of a hat. I also found myself shaking when I had to discipline my children. I was a single mom, too, and finances were tight. I heard about licorice root and got it. And I want to report that it made a difference in my abilities to cope. I did have to move to cortisol, but I was very impressed with what the licorice root did for me at the beginning.*

## **When you have high nighttime cortisol**

Many adrenally-challenged patients can find themselves with high cortisol at bedtime, in spite of low cortisol in the morning or during the day (another important reason *not* to rely on a one-time cortisol lab test, and instead use the 24 hour saliva test). The main symptoms of high nighttime cortisol are difficulty falling asleep or staying asleep. If you find yourself in this boat, here are individually-taken supplements that patients have found to be successful in countering the high bedtime cortisol level:

### **1. Melatonin:**

This is taken one hour before bedtime, since high nighttime cortisol can turn off your natural melatonin production, which means you aren't going to fall asleep easily, or stay asleep. Some doctors recommend starting at 1 mg, then raising a little at a time until you find the dose that helps with sleep. It's also never recommended to go higher than 3 mg, since melatonin can push your nighttime cortisol too low and cause hypoglycemia (low blood sugar). It could also affect your morning levels. Check with your doctor.

## 2. Phosphatidylserine, aka PS:

This supplement is also taken at bedtime, with a recommended dose ranging from 300 - 1000 mg which helps lower high cortisol. Phosphatidyl Serine (PS) is a fatty acid found in your immune cells and muscle tissue, but is also prevalent in your brain cells. It's actually promoted as a benefit for brain improvement, such as enhancing your memory, concentration, alertness and mood, besides cell repair and improving your immune function. But thyroid patients with high nighttime cortisol discovered that PS helps lower cortisol when its high levels are damaging—lowering it from 30% to 70% according to different literature. PS appears to work by regulating the HPA (hypothalamus/pituitary/adrenals) axis.

When you shop for PS, look for simply *Phosphatidyl Serine with no complex*. Phosphatidyl Complex has made some patients feel spacey in the morning. You can also find PS in a cream to be rubbed on the skin, bypassing digestion.

One downside of PS: it's derived from Soy. Soy is a known thyroid inhibitor. So you might want to pay careful attention to your other sources of soy and decrease them when you are using PS. Or consider a PS product without soy called Seriphos.

## 3. Zinc:

Studies report that zinc, whether doses of 25, 37.5 or 50 mg, lowers cortisol significantly even four hours after taken. It's taken with food to protect the stomach lining. Patients add 2-4 mg copper supplementation in the morning, since zinc can lower copper levels.

## 4. Holy Basil:

Many studies show that this herb, also called *Ocimum sanctu*, has proven cortisol-lowering properties. It may even help with regulating your blood sugar levels, as well as being an anti-oxidant.

## **5. Zizyphus:**

This popular herb, also called Jujube, is used in Chinese medicine and known for its good sedative qualities in the treatment of insomnia. Because of this sedation, it could help lower high cortisol. It's often used in combination with magnolia extracts, which may have a direction correlation in lowering cortisol.

## **6. Relora:**

This is an herbal supplement containing extracts of phellodendron and magnolia. It has been shown to lower high cortisol levels by attaching to your cortisol receptors, which the body takes to mean it doesn't need to produce more cortisol.

## **Your goal with cortisol supplementation**

As a thyroid patient with adrenal dysfunction, your ultimate goal with dosing is to find the least and correct amount of cortisol for your needs. For many, that appears to be around 25 - 30 mg, give or take, sometimes lower and sometimes higher (especially men), plus multi-dosed a minimum of four times a day with the highest dose (10 mg) first thing in the morning. There is no cookie-cutter, one-size-fits-all amount. Your optimal amount of HC will also resolve other low-cortisol symptoms, halt the anxiety-producing adrenaline surges, and give your adrenals the rest they desperately need.

Again, the way to know when you have found your optimal amount of HC is to do the Daily Averaged Temperature test five days after each 2.5 raise as outlined in Chapter 5 under Discovery Step Two. When each daily averaged temperature for five days in a row is within 0.2 - 0.3 F of each other (or 0.1 Celsius), and with a lean towards .2 F, you know you are on the correct amount, or very close. Then you raise your desiccated thyroid or T3-only to its optimal amount, which will bring the mid- afternoon temperature to a consistent 98.6 °F for most while maintaining a strong heart rate and good blood pressure.

*Note: if you keep raising HC higher and higher and never find stability in your Daily Average Temps, that can point to low aldosterone, which you will need to test. See below.*

We have noticed that some patients, whose adrenal dysfunction is quite bad, or if male, may need at least 30 mg or more before adequately getting thyroid hormone from the blood to the cells, as well as to stop the adrenaline surges that are common in the lower doses. Peatfield has mentioned that some are occasionally up to 40 mg or higher, though the latter amount may be due to poor absorption issues. It's never recommended to go higher than your needs to accomplish all the above. If you do go too high, and hold that high amount too long, you can risk suppression of your adrenals and immune system. Additionally, lowering high amounts of HC can be quite miserable, even if eventually successful.

Once you have achieved both goals—enough HC to stabilize your temperatures (found by doing one's Daily Average Temps) and optimal treatment of your hypothyroidism—you are taking great stress off of your adrenals. Additionally, treating your low cortisol, optimizing your thyroid treatment, and treating low ferritin/iron can help rebalance sex hormones in some individuals; others may need to treat their sex hormone imbalances directly.

## Raising HC

*Fast* is not in the dictionary for adrenal treatment. On 20 mg or beyond, it can take at least three days and up to a week for the effects of the cortisol to be apparent, especially the leveling out of your temperatures (using Daily Average Temps) and stopping the adrenaline surges that can happen on the lower, non-optimal doses. Paying attention brings the best information and results, as well as changing one thing at a time.

**Note:** *giving yourself too much cortisol can also cause unstable temperatures. That's why patients only go up by 2.5 mg, and do their Daily Average Temp comparisons five days after each raise.*

While raising HC, patients have found it wise to be on some tolerable amount of thyroid hormones. Without thyroid to work with, cortisol can go too high over time, even though at first, it was the right amount.



## Stress dosing

Healthy adrenals would produce extra cortisol in times of physical or emotional stress to enable your body to cope. Knowing that fact, adrenally-challenged patients have realized they will need to stress dose in the face of a long-term or a single highly stressful event, a body injury, or illness like the flu or worse. In fact, stress dosing can be extremely important for adrenal patients to prevent an adrenal crisis when the stressful event is dire. This is why patients state they keep hydrocortisone cream with them at all times.

When an illness approaches, one method used by patients is to immediately add 10-20 mgs HC, twice daily for three days. If used more than three days, it's tapered down to 7.5 twice daily, then 5 mg twice daily, then back to a former dose.

For those one-time events like a friend, loved one, child or boss who is in a rage, and at the first sign of a pounding heart or shakiness, a good dose can be 5 mg. If you still feel overly stressed, another 5 mg can do the trick. Three days and up to 20 mg per day is the maximum for stress dosing in most cases, though there are occasional situations like unwanted family members during a holiday that can spell longer stress dosing.

Jeffries, in his book *Safe Uses of Cortisol* states:

*[In events of stress] higher dosages of cortisol are required to maintain a physiologic state that would produce hypercortisolism with its well-known undesirable effects in the unstressed states. The increased secretion of adrenal hormones serves to meet an increased need during stress and tends to maintain homeostasis rather than to disturb it. The increased secretion does not cause a state of hypercorticism such as develops when the titer of these hormones is increased artificially in the absence of need. Hence, a patient with adrenal insufficiency under stress may require dosages of cortisol to maintain a physiologic state that would produce hypercortisolism with its well-known undesirable effects in the unstressed state. This higher amount can be up to double what you would normally take daily.*

Once you have stress-dosed for a few days, or the illness has started to subside, doctors guide patients to taper off the extra amounts a little at a time, eventually ending up with the amount they were previously on.

*Note: if you find yourself frequently stress-dosing for emotional stress, you may simply not be on enough HC with stabilized temps.*

### **When even higher doses of HC aren't doing the trick**

It's not the norm, but some patients definitely experience that doses higher than 35 - 40 mg of HC are not raising cellular glucose levels to work with thyroid hormones, perhaps due to digestive issues, a resistance, or a problem with metabolizing HC too quickly between doses. And the higher doses increase the risk of side effects, including water retention, since HC has salt retaining properties.

So with their doctors guidance, they then move to a five-times stronger, longer-acting Glucocorticoid such as methylprednisolone with a brand name of Medrol. It's either a partial dose or a total treatment. Medrol has lower fluid-retaining properties than HC, seems to have less side effects, such as a decreased danger of high blood pressure, and less stress on your liver.

But, Medrol can be much harder to dose, and it should be used only as a last resort. In conversion amounts, 1 mg of Medrol is equal to approximately 5 mg of HC. Patients who make the switch can end up on 6 mg of Medrol, spread out over the day, such as 3 mg first thing in the morning, 2 mg in the mid-afternoon, and 1 mg at bedtime.

If stress-dosing is needed on Medrol, patients use HC.

### **DHEA—to take or not take**

DHEA is another stress hormone released by your adrenals and is a counter balance to your cortisol. And when cortisol gets low, so does your DHEA eventually fall. Some research claims that DHEA supplementation can further lower one's already-

low cortisol levels, whereas other research shows no decline as a result of DHEA. Dr. John Lowe explains the contradiction in studies here: <http://www.drLOWE.com/QandA/askdrLOWE/dhea.htm>.

In groups, you'll find some patients stating they feel well on DHEA. As a result of these mixed study results and experiences, the only way to know if DHEA supplementation is lowering your cortisol is by doing temp taking as outlined in Discovery Step Two in Chapter 5.

## **Cortisol and weight gain**

Many patients who treat their sluggish adrenals with hydrocortisone report unwanted weight gain. There are a few reasons it can happen. One, oral administration of HC may encourage the body to produce glucose (blood sugar), which in turn causes fat production and storage from the excess insulin. Two, the mineral content of HC may be contributing to water gain. Three and most likely for many, low cortisol symptoms mask low hypothyroid, and thus, correcting the low cortisol situation uncovers your continuing hypothyroid condition, which promotes weight gain until you also raise your desiccated thyroid or T3-only. Four, you may be on too much and need to talk with your doctor about slightly lowering it while still maintaining stable daily averaged temperatures.

Whatever the cause, it will be prudent to watch your diet far more closely than before, focusing on proteins and vegetables as the main part of your daily consumption, and much less on carbohydrates. When carbohydrates are consumed, choosing those that are low glycemic is a positive decision, since low glycemic carbohydrates are digested much slower than high glycemic. Examples of low glycemic foods include high fiber grains, berries, cottage cheese, meats, most vegetables, etc. Those foods to curtail or avoid are sugars, potatoes, pasta, white rice, and white flour products.

## **Sex Hormones while on HC**

Some patients have discovered they can't wait on their optimal HC use to address their sex hormone issues with their doctors. So they start to treat those problems while working on their HC.

Testosterone supplementation is one example, since HC use can lower your testosterone levels. And if you were already low, this can be a problem. Low estrogen often needs to be addressed since it can exacerbate high glucose levels, or trigger hypoglycemia (low blood sugar).

## **Muscle weakness while on HC**

The use of cortisol, even the smallest amounts, initially can cause your testosterone levels to tank, as it can potassium. Low estrogen makes the weakness worse. This is especially a problem if you are a woman and have no ovaries or are into menopause. So you may need to talk to your doctor about testosterone and potassium supplementation for the first few weeks or months of your cortisol use.

## **Problems tolerating HC**

Most of the time, patients have found that their problems with HC are actually from taking too little, or needing to dose closer together, such as every 2-3 hours, to help build low reserves. Taking HC with food in the stomach is a must.

## **Cortisol and blood pressure**

If you have high blood pressure when you start on any cortisol treatment, it's a good choice to monitor your blood pressure during the treatment and keep in touch with your doctor as to the trends of your blood pressure. Treatment of aldosterone can also causes blood pressure changes.

Even if you don't have high blood pressure, monitoring blood pressure and pulse is a good idea while dosing HC. Both give you good clues about your HC dosing.

## **Exercise with adrenal dysfunction**

Adrenal patients have found out repeatedly that almost any form of exercise has been unhealthy for their challenged adrenals. Why? To the degree that you exercise, to the same degree demand is put on your adrenals. That can be a hard message to hear when

some individuals have valued their exercising routine. Instead, rest and more rest can be the most recommended response to assist in adrenal treatment and stabilization. I tell adrenal patients to look at it like taking a different path in your life—a healthy path that is extremely important.

## Waking up during the night

If you go to bed with high cortisol (as proven by saliva testing) and somehow manage to fall asleep in spite of it, there can be a tendency to wake up frequently.

On the other side of the coin, some have excessively low middle-of-the-night cortisol which also causes many patients to wake up from the adrenaline rush and hypoglycemia, aka low blood sugar. Low blood sugar is a common result of low cortisol. Many report this happening around 3-4 am, as well, but it can be individual. It's the time when your cortisol should start to rise to prepare you for your normal morning wakeup time...but it's not rising at all.

One solution patients have used against waking up from low cortisol is having the last dose of your total daily amount of HC at bedtime, such as 2.5 mg with food. If waking up continues, those patients move that up to 5 mg.

Another strategy used by patients who experience that middle-of-the-night waking up is to take two Isocort or an Adrenal Cortex supplement, and with a small amount of food. If you use an Adrenal Cortex product, you have to make sure that the label clarifies it to *only* be the cortex. If it also states glandulars along with the cortex, you'll be giving yourself more adrenaline—the very thing you don't need and which was causing you to wake up in the first place.

If confused what is going on at night, there are lab facilities which offer six saliva testing times—two of those are during the nighttime. You can make an educated guess that the middle-of-the-night wakeup is from low cortisol if saliva already revealed very low morning cortisol.

Other helpful strategies for better sleep are those which promote relaxation before bedtime. Kim, an adrenal patient, explained it like this:

*I outright took our TV out of our bedroom. If I wanted to watch evening television, I started doing it in another room. I wanted*

*my bedroom to represent peace and quiet, not the excitement of a talk show or adventure movie. I also went to bed early enough to read magazines or positive books. I bought satin sheets, a new pillow, and a very soft cotton nightgown. I know it may sound silly, but I wanted to promote as much comfort as I could. And with my other strategies, it has helped a lot.*

## Low aldosterone

Turns out that quite a few adrenal patients with low cortisol also have an aldosterone problem. Aldosterone, a mineralcorticoid hormone, helps regulate levels of sodium and potassium in your body when your adrenals are healthy—i.e. it helps you retain needed salt, which helps control your blood pressure and the distribution of fluids in the body. In turn, it contributes to balance of the electrolytes in your blood like calcium and magnesium, and helps prevent potassium from rising too high.

*When aldosterone gets too high*, especially in the face of chronic stress, your blood pressure also gets too high and your potassium levels can go too low. You can have muscle cramps, muscle weakness, and numbness or tingling in your extremities. Even scarier, research has shown that chronically high aldosterone can shorten one's life, perhaps due to higher blood pressure.

*When aldosterone gets too low*, which is the most common situation for adrenal fatigue patients, your kidneys will excrete too much salt, and it can lead to low blood pressure, low blood volume, a high pulse and/or palpitations, dizziness and or light-headedness when you stand, fatigue, and for some, a craving for those salty Lay's potato chips in your cupboard. Symptoms of low aldosterone can also include frequent urination, sweating, and a feeling of thirst, plus feeling hot.

Many patients with low sodium levels have chosen to treat the symptoms of low aldosterone with supplemental sea salt. Sea salt contains important trace minerals, whereas most trace minerals are removed from table salt. Sea salt is placed in water and sipped on all day. Some start on ¼ tsp, taken twice a day to equal ½ tsp total. Some move to ½ tsp twice day, and some go as high as one tsp twice a day.

But...a large body of research reveals that the more sodium

you give yourself, the more your aldosterone will fall, as well as your angiotensin II, a peptide hormone which works with aldosterone to find the right balance of sodium and potassium. i.e. too high levels of sodium will cause further lowering of your already-low aldosterone, which could still lower your sodium again. And the more sodium you ingest, the thirstier you can be. It's a balancing act each person has to figure out.

Additionally, when the adrenals are not making aldosterone, renin, a hormone from your kidneys, increases. (If the renin is low, you could have a pituitary problem.)

## **Testing aldosterone**

The most important thing to know about testing your aldosterone is that it's a must, since both low and high aldosterone can have similar symptoms in some. The day before your test, you'll want to avoid salt in any form, whether avoiding the salt shaker, sodas, French fries, cottage cheese, pizza or any high salt foods. Fast after you go to bed. Note that Motrin, as well as beta blockers, steroids and diuretics, can affect your result.

The testing is best done in the morning around 8 am and after you've been moving around for the day, which boosts aldosterone levels. You'll want to be sitting for the blood draw since your body position can affect your aldosterone levels.

It's important to know that aldosterone levels can be doubled if you are pregnant, and are normally a little higher in children than in adults. For women, it's best to do the test within the first week after you start your period, since your rising progesterone levels can affect the aldosterone.

*For a complete picture, ask your doctor to include your renin, as well as sodium and potassium, for testing at the same time.* Low aldosterone can also be detected by a lab potassium result over 4.4 and low sodium results. You can test the latter two without a prescription and bring the results to your doctor. See Addendum D for facilities.

## **Treatment for low aldosterone**

One of the first treatments a patient should consider if labs show low potassium is prescription slow-release potassium. Slow

release prescription potassium in high amounts has helped many patients. Labs are retested every 2-3 weeks to make sure you don't go too high.

Even the use of Licorice root can be helpful since its glycyrrhizin mimics aldosterone in affect. But watch your blood pressure, say patients, which Licorice root can raise. If raising potassium and using licorice root hasn't helped, the prescription medication of choice for low aldosterone is fludrocortisone acetate with the brand name **Florinef**.

Talk to your doctor about starting with a quarter of the 100 mcg pill rather than starting on the full pill, since it's very potent. It's also recommended to take your Florinef with a small amount sea salt mixed in water.

With each dose, one is watching whether pupil fluctuations or the BP test has improved, as shown in Chapter 5, Discovery Step Two. If not, patients raise a quarter pill every 7-10 days depending on the tests. The goal is to get to the full pill, or until blood pressure is normal and symptoms of low aldosterone disappear. Some patients report going as high as two pills before getting the good effect they need, but less is more common.

When keeping track of your blood pressure, make sure your arm is resting perpendicular to your body, not downward—the latter a mistake that many nurses and doctors make.

One way to know you are on too much Florinef is by high blood pressure, fluid retention and/or pressure headaches. Also, even when you are on the right amount of Florinef, it can lower potassium levels as a side effect, so it's crucial to supplement with potassium, say many patients and doctors, and keep track of potassium labs.

It's also important to note that some patients who are already on HC (cortisol) may have to lower it to compensate for the glucocorticoid potency of Florinef. Later, when one feels ready to wean off HC, patient experience has shown that it's better to stay on Florinef a little longer before weaning off Florinef. If a patient finds Florinef to have uncomfortable side effects like dizziness or nausea, and they need to come off of it, patients usually end up raising their HC and increasing sea salt consumption.



**Important note:** *if you have high blood pressure with low potassium, consult with your doctor about the use of Florinef and risks.*

## **How long you will need to be on HC**

With the adrenal dysfunction experienced by thyroid patients, length of time being on HC can be quite individual. We've learned that the first step is to make sure you have achieved two goals: enough cortisol to stop your fluctuating temps and allow thyroid hormones to reach your cells, then enough desiccated thyroid or T3-only to stop the hypothyroid symptoms while maintaining a good heart rate and blood pressure. You also have to make sure you have treated other issues: low ferritin or iron, low B12, and any other deficiency or issue.

After you achieve all the above, you may need a minimum of several months to a year or more before attempting to slowly wean off and to allow your adrenals to kick back in. You can also need to be on HC for several months just to build your cortisol reserves. In fact, many patients have to be on HC for at least a year or two. Some patients report they started to wean when they forget a small dose, and found they tolerated the lack of the dose well for several days. But again, don't rush it.

Remember: if you are the minority with adrenal fatigue due to Hypopituitary, a secondary cause of your adrenal fatigue, you may need to be on HC the rest of your life.

## **Letting others know of your HC use**

I highly recommend the use of an ID bracelet or information in your wallet about your daily amount of HC, as well as the name of your doctor and phone number. Also inform close family members or friends what you are doing. You may also find yourself feeling great relief if you carry extra hydrocortisone pills or cream with you when you are expected to be gone from your house for several hours. The worst thing you want to do, in your attempt to have better health and de-stress your adrenals, is to forget a dose, or not have what you need when it's time.

## **Weaning slowly is the key**

Patients and their doctors have learned that the beginning of a successful wean means to cut off only 2.5 mg per 2-3 weeks at the minimum. Remember, by weaning, your rested adrenals are suddenly being encouraged to make up the slack. Let them get the message with ease. You can start by weaning off the latest dose, and then slowly move upwards in the day, or whatever time seems to work best for you.

We have discovered the importance of timing the wean to occur during the least stressful time of your daily life. This means avoiding holidays, stressful events or busy times of the year. If during your weaning process you encounter stress, you may have to stress dose as mentioned above. It will slow down the wean, but it will also prevent further stress on your adrenals.

When you feel ready to wean, consider it a huge no-no to stop your HC suddenly. This can create an adrenal crisis—a life-threatening situation where your body is suddenly without the crucial cortisol. Symptoms include low blood pressure and weakness, headache or nausea, shaking or confusion, a rapid heart rate, or sweating.

## **Failures in weaning**

When weaning is difficult, it's often due to undiscovered or undertreated issues, including gluten intolerance, low B12, low iron, Lyme disease, or many other issues including low Free T3. That's why it's important to do labwork, pay attention to continuing symptoms, and use this book for clues to discuss with your doctor.

## **Post-weaning strategies to keep the success**

Once you have successfully weaned off your HC, there are important follow-up strategies to promote continued success. One is to continue over-the-counter adrenal support for a few months, especially in response to stress. Supplementing with Vitamin C, B-vitamins, and other anti-stress vitamins, herbs and minerals can also be beneficial. Removing stressors in your life is important. Comparing your daily averaged temperatures can

continue to be a monitor as to your adrenal recovery progress.

Perry, a thyroid patient whose main focus is with men's issues, developed the following tips for weaning:

1. For some amount of time after weaning (6 months? We don't know yet), your adrenals will be weak, and you will need to support them whenever stress re-enters your life.
2. The sooner you recognize the stress and respond with adrenal support, the more likely you are to avoid a major crash.
3. If you know something stressful is coming, you should begin supporting your adrenals before it happens. How much before depends on when this future event begins to occupy your mind (and cause stress).
4. Some early signs to look for are: a desire to snack continually; a tendency to "withdraw" from friends, family, and favorite activities; an exaggerated startle reflex; a tendency to get flustered by normal events like telephone calls; overreacting to the words or actions of others; a return of any of the symptoms you experienced the first time you needed adrenal support.
5. Adrenal support after recovery for periods of less than one week can be discontinued abruptly. If support is used for one week or longer, it should be tapered off at the same rate as you originally weaned. For hydrocortisone, a good rate seems to be reducing by 2.5 mg every 2 - 3 weeks.
6. Some events to watch out for and are nearly always stressful are: vacations; family visits; holidays; dental work; colds, flu, and other illness.
7. Don't consider going back on adrenal support as a defeat.

Using adrenal support as needed during the recovery period will help you ultimately be successful in recovering full adrenal function.

## **High cortisol 24 hours a day**

What if, unlike all the above, you find yourself with high cortisol at all four times of a saliva test? As author of this book,

this is exactly what happened to me. And if I didn't do something quickly, I was destined to fall into the more serious stages where the adrenals can't keep up and cortisol becomes low.

My own high cortisol was due to a long term use of topical progesterone to counter high estrogen. Once I figured it out, I stopped the supplementation. Within a few days, strong signs of progesterone overuse, similar to estrogen dominance symptoms, stopped. But I still had months of treatment to lower my high cortisol, and which included the liberal use of PS, as mentioned above.

High cortisol can go on for months before you realize it's happening. When it finally rears its ugly head, you can have similar symptoms to low cortisol: easy fatigue, nausea in the face of stress, shakiness, lowered temperature, depression, achiness, etc. You will also tend to have rising or high blood pressure. Additionally, because high cortisol makes conversion of T4 to T3 difficult, you end up having far too much T4 and a conversion to Reverse T3—the latter which will serve to block regular T3 from making it to your cells. The only way to accurately know you have high cortisol is to do the 24 hour adrenal saliva test. The reasons you may have high cortisol are varied: chronic emotional stress, chronic health conditions, blood sugar problems, poor eating or sleeping habits, a compromised immune system, severe exhaustion, heart disease, too much weight, or like me, the use of topical progesterone. Each person has to figure out their own catalyst, and change it.

## **The bottom line of adrenal support**

The sum and substance of adrenal support is to use that which is easiest yet effective. For some, that can be the use of adaptogens to counter the highs and lows of early dysfunction. Others with moderate low levels may need Licorice root, or over-the-counter cortisol-containing supplements like Isocort or Adrenal Cortex. Some can effectively use both at key times—over-the counter for low cortisol areas, and adaptogens for high cortisol areas. And finally, some may need prescription cortisol.

It's always strongly recommended by patients, who've walked the path, to do a 24-hour adrenal saliva test, since symptoms of

high cortisol can be the same as low cortisol. Guessing what is going on has gotten patients in trouble. Don't guess!! You can also use the Discovery Steps in Chapter 5 to first get an idea that you might need to do the saliva test.

Rejuvenation of our adrenals, once fatigued, can take time and patience, as well as particular lifestyle changes away from stress, and in the way we deal with stress. It can be slow, but the progress will be there!

### ***Adrenal Tidbits:***

- \* *The over-the-counter adrenal support you take earlier in the day (for a single low saliva result) will eventually help drop too-high levels later in the day, and vice versa.*
- \* *A high heart rate can be from high cortisol, low cortisol, low sodium, low potassium, low magnesium, low iron and more.*
- \* *You won't recover from illness while on HC as fast as you would have with healthy adrenal function.*
- \* *A slightly higher temperature can be from too much thyroid, too low aldosterone, or low iron.*
- \* *A large body of patients with adrenal dysfunction choose to switch to T3-only due to high levels of RT3.*
- \* *When supplementing with HC, cortisol levels can go too high if one is not taking any thyroid to help clear the cortisol.*
- \* *Having a hard time finding stable Daily Average Temps after raising and raising again? That can point to low aldosterone.*
- \* *At the beginning of adrenal support with HC, one may need more than later to build up depleted reserves.*
- \* *The T3 Circadian Method works with desiccated thyroid, and also helps raise your aldosterone levels, if needed!*

# CHAPTER 7

## The Doctor Chapter

*For this is the great error of our day that  
the physicians separate the soul from the body*

~Hippocrates

Many times over numerous years while on either Synthroid or Levoxyl, I felt like a worn out piece of over-chewed bubble gum. And I just knew that a visit to a doctor was the answer, no matter how far I had to drive or how long the appointment took.

In fact, who as a thyroid patient, hasn't felt immeasurable hope that a doctor was going to help. And why not? They've had the most immense education and demanding training of most any profession, including several years of internship and residency before they even hang their shingle on the door.

So when you walk into their offices, it's like the once familiar Allstate Insurance commercial refrain: you know you're in good hands. The doctor or health professional is going to prescribe the right pills or use the best therapy to help you turn the corner towards better health.

*Yet, to the degree thyroid patients have had high hopes in their highly educated and experienced doctor, to the same degree that hope has repeatedly turned to dust.*

In fact, the compelling and descriptive experience of thyroid patients globally with their doctors ranges anywhere from disappointing, frustrating and sad... to shabby, disrespectful,

ignorant, patronizing, pompous, close-minded and bordering on malpractice.

### **Intense, real, and extremely pitiful.**

Are there doctors who are the rule to the exception? Yes. Their numbers have been growing thanks to the patient-to-patient Stop the Thyroid Madness movement. Some doctors are listening. Some doctors are open-minded. Some are treating patients with respect. We so appreciate you.

Unfortunately, though, progress is slow within the wider ranks. Stephanie, a thyroid cancer survivor who gives thanks, in part, to her use of desiccated thyroid, remembers vividly the doctor of whom she first asked about prescribing the pre-formulated Armour. She had already observed the benefits in others and felt it was a right choice for her. In her blog she wrote:

*First, he breezes into the room and shakes my hand and exclaims "Well we had you on 0.175 mg of Synthroid and you were experiencing hyper symptoms (TSH was 0.024) and we reduced your dose to 0.150 mg but now your TSH is WAY too high so we need to bump you back up to the 0.175 mg dosage again." EXCUSE ME???? I felt bad on 0.175 mg and 0.150 mg isn't working so let's just put you back where you felt bad and not think about options?? UGH!! I didn't say this but thought it. This is the point where I interjected that I wanted to know where my Free T3 numbers were so I had them run. I produced my lab slip for him. I told him that I had been studying T3 and how some people don't convert T4 to T3 well. He went on and on about how it wasn't true that they had done lab tests on dead babies and had found T3 in them. I said "WHAT???" I said "Listen again—I didn't say that I didn't make T3 at all but that I could be someone who didn't convert it WELL enough to give me what I needed." He quickly changed his tune and said "Oh I know what we can do. I'll leave you on the 0.150 mg since you seem to feel well on that (never asked me how I was feeling though just assumed that since I hadn't called I was OK) and we'll add some synthetic T3—it's called Cytomel". UGH! I swear he thinks I am an idiot and it is so patronizing! I already knew his protocol before I got to his office. So at this point I interject with "Can I try Armour?" You*

*should have seen how fast he looked up from his paper that he was writing on. The entire time he was telling me what we were going to do he couldn't take the time to look at me prior to this. He exclaimed "ABSOLUTELY NOT." I asked "Why not?" This pushed his buttons as he physically began to shake. I got the "Because it isn't for you." So I pushed further—"Why not?" Then he gives me the canned answer (I think they get this in Endo school) "Because it isn't stable." I said "What do you mean?" I swear this man was about ready to strangle me for asking questions and questioning his authority but I pressed on. He said "Because it is from a Pig and you don't want to take pig hormones."*

As Stephanie continues in her blog, the doctor proceeded to give a variety of negative and condescending explanations against pig thyroid, including the dictate that she would die if she took it.

*I left his office and went out to my car and cried. It is very hard to have a Dr. tell you that you will die of cancer if you take Armour—whether you believe it or not.*

In the notes in her doctor's chart, he wrote the following:

*Stephanie states that she would like to try Armour thyroid. I told her that this is unacceptable and I would not place her on it. She will have to see another physician if she wants to try this medication because it is animal derived and the T3 & T4 levels are not closely regulated, and cannot be independently adjusted.*

It doesn't take much to imagine how Stephanie may have felt--she was now being told that what might make her feel better, was not acceptable.

## **The experience of patients**

When you peruse most any thyroid patient group on the internet, or talk to thyroid patients one-on-one, you find that there are a myriad of common and heart-wrenching negative stories about visionless, indiscriminate pill-dispensing, medical practitioner zombies.

Additionally, most thyroid patients will state they have been harmed when they discover how ineffective T4-only medications



really are, or the failure of the TSH lab test as the so-called “gold standard” of diagnosis and treatment. Additionally, they will state extreme harm when they find themselves with dysfunctional adrenal output as a result of both of the above.

Being harmed by one’s doctor is an action polar opposite to the oath of standards and ideals that most physicians took when they were about to embark in their medical practice.

Have doctors come to see their medical school oath as nothing more than a staid, rote and meaningless ritual? Part of the original Hippocratic Oath, which some schools have grossly modified or removed, states in the original Greek:

*To please no one will I prescribe a deadly drug nor give advice which may cause his death.*

Yet, nothing has been more deadly to thyroid patients for decades than a drug called thyroxine so exuberantly prescribed by most every doctor, and which has served to leave each and every thyroid patient with some residual hypothyroid symptom. This is equally so for the TSH lab test and its dubious “normal” range, which is worshipped across the board by doctors.

All you have to do is read my own story of 17 years (see Introduction), going from doctor to doctor to doctor, and not finding one who was thinking beyond his or her medical school training box to observe that perhaps thyroxine as a sole treatment for hypothyroid was not working, or that the “normal” TSH range did not conform to my clinical presentation! I also had to endure doctors who were dismissive, close minded, and condescending, even if well-meaning.

Aspects of my story, Stephanie’s experience, and worse, can be found in millions of thyroid patients across the world. This is not a scenario that only involves a few. So now, we have to ask: are physicians listening?

### **Four crucial mistakes made by medical practitioners**

Thyroid patients all over the world are growing in their knowledge and truth against what doctors have been doing. I now highlight four crucial and consequential mistakes that most all patients have experienced. Each mistake represents an area that needs drastic change:

## 1. Making thyroid lab work the holy grail of diagnosis in lieu of obvious clinical presentation of poor thyroid function.

Of all the mistakes listed, this misjudgment has been the most widespread and damaging, physically and psychologically, to thyroid patients. Put yourself in the shoes of a patient who enters his or her doctor's office with factual and obvious hypothyroid complaints of continuing poor stamina, feeling cold, gaining weight, dry skin, hair loss, rising cholesterol and/ or depression, only to be callously told that because the TSH or other lab results are within range, he or she is "normal". Thus, it's concluded that her symptoms have nothing to do with hypothyroid. So, the doctor reasons, she needs other medications to treat the 'non-thyroid' symptoms, to eat less and exercise more, or see a psychiatrist.

Hogwash!

It has occurred not only when a patient first enters the office, having no prior thyroid diagnosis, but even more maddening when the patient is already on a thyroid medication, including levothyroxine T4, as well as an inadequately low dose of desiccated thyroid.

The litany from patients who have experienced this schizophrenic "normal" diagnosis in the face of continuing symptoms is full of angst. "I must be crazy!" is the outcry of this all-too-common encounter with doctors.

LeeAnn relates the following crazy-making scenario:

*I was on Synthroid for 7 years, and I was depressed. There was no depression in my biological family, I had a happy marriage, and I loved my job in the courthouse. I made a lot of appointments with doctors, and each and every one told me I had a psychological problem. Three pushed antidepressants on me, one insisted I needed to admit myself in a mental health facility at the Presbyterian Hospital, and two told me I needed to make an appointment with either a Psychiatrist or Psychologist. I fought it for a long time, then decided maybe I AM nuts and need help. It was chilling, let me tell you.*

Many years and decades before thyroid lab work came into existence, doctors paid attention to symptoms and dosed by those symptoms (as well as the exclusive use of desiccated thyroid). Today, the clinically presenting symptoms and signs of hypothyroid are no less obvious than a nose on a face, yet the

constellation of hypo- symptoms are routinely dismissed if ink spots on a piece of paper state otherwise. It's a one-track worship of the dubious TSH lab with its erroneous "normal" range, or the total T4 or free T4. So patients are left hanging over the alligators of their obvious hypothyroid symptoms with a doctor proclaiming "You are normal."

On the other side of the coin, you have the patient on desiccated thyroid who walks into the office feeling wonderful—full of energy, lowered cholesterol, freedom from depression, thickening hair—yet because of a suppressed TSH, the patient is told to lower the desiccated thyroid, which only results in the return of previous hypothyroid symptoms.

## **2. Maintaining complete ignorance about desiccated thyroid**

Any thyroid patient who has dared to ask about desiccated thyroid like Naturethroid, compounded, Erfa's Thyroid, etc, has heard every single possible misconception there can be from the mouths of our doctors. Because of that, you come to believe that not one doctor can think beyond his medical school training, continuing education, medical journals, or the lips of his favorite pharmaceutical rep. It's as if the experience of patients who have successfully used desiccated thyroid, past and present, is completely and totally invisible.

Even worse are those patients who are citizens of countries where the use of a beneficial and life-giving product like desiccated thyroid or T3 is banned! Though there can be closed walls because of religious beliefs towards pork, the majority of patients who contact me about their nation's prohibition of desiccated thyroid appear to describe a misconception of the safety of the direct T3 in desiccated thyroid.

The following are actual one word descriptions made by numerous doctors to their patients about desiccated thyroid. As reported to patients by patients, they represent the ignorance that abounds among medical professionals, ranging from sublimely false to the absurdly ridiculous:

Unreliable  
Unstable  
Dangerous  
Inconsistent  
Old-fashioned  
Outdated  
Unconventional  
Unregulated  
Harmful  
Toxic

Isn't it interesting that the only word that patients have found to be true about desiccated thyroid is that it's *old-fashioned*, just as it might be old-fashioned to wear clothes from your past that still feel good, or use vintage tools that still work well. Patients have repeatedly experienced desiccated thyroid to be quite reliable, safe, consistent from dose-to-dose, regulated by the USP, modern, conventional and with life-saving results as compared to T4, thyroxine-only treatment.

Equally as bizarre and somewhat humorous are the descriptions patients have reported coming right out of the mouths of their doctors.

- *You will get Mad Cow disease from prescription desiccated thyroid (Cough. It's porcine, not bovine).*
- *The T3 in Armour is a narcotic or like speed.*
- *Desiccated thyroid is only given to patients who are "allergic to Synthroid".*
- *If the patient felt better on desiccated thyroid, it had to be due to a preservative in the medication.*
- *It's made from horses.*
- *Just because you feel better on cocaine doesn't mean it's good for you.*
- *It's not made anymore.*
- *Desiccated thyroid is unstable because of the stress of the pigs when they died.*
- *Desiccated thyroid is made from pig testicles.*
- *It's an inferior product made by scooping up the entrails of animals from filthy slaughterhouse floors, and all kinds of bone and germs are in it.*
- *Those who use desiccated thyroid are simply a radical fringe group.*

### 3. Bandaiding obvious hypothyroid symptoms with more medications or treatments

When patients have complained about ongoing and chronic low grade depression (*a classic hypothyroid symptom*) while on T4-only medications like Synthroid or Levothyroxine, we've been put on most any class of prescription antidepressants over the years, including SSRI's (selective serotonin re-uptake inhibitors), tricyclics, and MAO-inhibitors (monoamine oxidase inhibitors), plus the newer varieties like Effexor, Remeron, Serzone, and the currently popular Wellbutrin. Or, like my own mother's tragedy, we receive electric shock therapy.

When our cholesterol has risen too high (*a classic hypothyroid symptom*), we've been thrust the prescription of our doctor's favorite fermentation-derived or synthetic "statin", as well as resins, prescription Niacin, gemfibrozil or clofibrate, with all their predictable side effects.

When our hair started to fall out or our eyebrows almost disappeared on the outer edges (*classic hypothyroid symptoms*), we've been sent to the nearest Dermatologist, who proceeds to state we have the autoimmune condition called Alopecia Areata. We are then steered towards an over-the-counter product like Rogaine, or scalp injections of cortisone.

When we complain of anxiety, emotional swings, an inability to concentrate, foggy thinking, confusion, etc. (*classic hypothyroid and/or low cortisol symptoms*) we are given our doctors' favorite band-aid psychotropic medication that can contain unneeded fluoride, clash with other medications, make our hypothyroid worse (i.e. lithium), make us fat or can leave classic side effects. This doesn't even begin to cover the costs of these types of medications!

When, like me, we had reactions to activity so bizarre that they incapacitated us (*classic hypothyroid symptom for some of us*), we have been sent to do unusual, expensive and painful tests, or have been given unfamiliar and far-fetched diagnoses that only served to give meaning to paperwork rather than reality.

When we have complained of ongoing fatigue and poor stamina as compared to others (*classic hypothyroid symptom*), we've been given the spurious diagnosis of Chronic Fatigue Syndrome or even Fibromyalgia, in lieu of evidence of Lyme's Disease, Epstein Barr Virus, or other maladies.

When we complain of weight gain that doesn't correspond to our calories consumed, or a severe inability to lose weight no matter how low our calories are or how vigorous our activity is (*classic hypothyroid symptoms*), we are told to simply eat less, exercise more. Or like one patient, who was told that she has nothing more than an 'eating problem', and 'if she had been in a concentration camp, she wouldn't be fat'.

#### **4. Failing to understand the consequences of adrenal dysfunction, low ferritin/iron, high RT3.**

The reality of adrenal dysfunction accompanying undiagnosed or undertreated hypothyroid has become clearer to patients the past few years, as have treatment strategies. And no matter how good a doctor becomes in his or her understanding of desiccated thyroid, the correct labs, and dosing by symptoms, failure will continue without understanding the low cortisol factor in such a large body of hypothyroid patients, and how to treat it. Chapters Five and Six detail this common connection.

Also all-too-common in thyroid patients is low ferritin or iron, which like low cortisol, causes thyroid hormones to pool in the blood and fail to be received by the cells. This factor, in turn, causes hyper-like symptoms which can be reversed with proper treatment of either. This is covered in Chapter 13. And both low cortisol and inadequate iron means a patient will tend to have high levels of RT3, another cell-blocking condition. This is covered in Chapter 12.

#### **Accountability and change**

When a dog bites my leg, I'm going to blame the dog for my pain. Accordingly, when a doctor is patronizing, disrespectful, arrogant, closed-minded, robotic and/or fails to listen to obvious clinical presentation or wisdom straight from the mouth of the patient, blame lies squarely on the shoulders of the doctor and deserves every ounce of our condemnation and call for change.

In turn, when a doctor blindly follows the Big Pharma lie that a myriad of pills are all that's needed to deal with our ills, it's time to step back. The money-hungry pharmaceutical influence

in both medical schools and the doctors offices is both formidable, tragic and lazy. Medical intervention has come to lie in pills and ink spots rather than in clinical observation and intuition!

Additional blame can be directed towards the old-boy, big brother influence of a doctor's conservative die-hard medical board or governing body. I still shudder when I think of the transcripts I read between a doctor who dared to prescribe desiccated thyroid and dose by symptoms, and his accusing narrow-minded licensing board.

Thyroid patients are calling for serious change in both diagnosis and treatment of hypothyroidism by the medical community. When you make published trials, professional peer pressure, or sales figures the evidence, you are no better than the undressed king who blindly made nakedness the norm. Because we, your patients, are exclaiming *The King is Naked!* The TSH lab does not correlate to how we feel! T4-only meds do not remove our hypothyroid! *Stop the Thyroid Madness!*

***Doctor Tidbits:***

- \* *Many patients report that seeing an Endocrinologist has only served to keep them sick when it comes to their rigid reliance on T4-only meds and the TSH lab test, as well as their disdain for your own wisdom.*
- \* *What's a Good Doctor? One who respects your own wisdom and intelligence, will do the labs you request, and works with you as a team.*
- \* *What's a Bad Doctor? One who talks to you like you couldn't possibly have a brain, refuses to do the labs you request, and thinks only he or she should have a say-so in your health and well-being.*

# CHAPTER 8

## *The Reasons You May Be Hypothyroid*

There are many proposed causes for the onset of hypothyroidism, a lowered metabolism, or the underactivity of your thyroid gland, some with a genetic factor, some due to low iodine, some due to a variety of other causes. Some of these causes, if corrected, can resolve your hypothyroid state. Others will need medication. This may not be an exhaustive list, but covers more commonly known reasons. Recognize any of your own?

### **Hashimoto's Thyroiditis**

Also called “Hashi's” or thyroiditis, this is an autoimmune disorder in which one's immune system attacks its own thyroid cells, causing inflammation and ultimate destruction of your gland over time. It can be one of the most common reasons for your hypothyroid condition. Detected by two antibodies labs—the thyroglobulin (TG) and thyroid peroxidase (TPO)—it can often cause the development of a goiter or swelling in the neck area. Many patients report tightness when they swallow, but some have no symptoms. Patients with Hashi's can vacillate between hypo- and hyper when the attack grows. There is a genetic predisposition to autoimmune disease, so if you have one, you are more at risk to have others like Celiac disease. (See Chapter 9.)



## **Postpartum, Post-Pregnancy Hypothyroid**

Numerous patients report that either Hashimotos or simple hypothyroidism appeared after the birth of a baby, and can also be called “silent thyroiditis” or “post-partum thyroiditis”. Some women report they had no indication of an attack or the swings between hypo- and hyper of Hashi’s, and simply developed postpartum hypothyroidism. The first signs are easy fatigue, depression (post-partum depression) or reoccurring sicknesses. The causes can be multifold, from genetics or blood sugar problems to changes in hormones or the immune system.

## **Overtreatment for Graves Hyperthyroid or Hashi’s with Radioactive Iodine**

Radioactive iodine (RAI) is commonly used to treat and curb hyperthyroid Graves disease, but can also be a post- surgery treatment to remove a cancerous thyroid, or in some cases to treat Hashimoto’s. It results in the destruction of the thyroid gland. Hypothyroidism appears quickly in some or later in others. Other radiation to the head or neck, including for Hodgkin’s disease, can cause hypothyroid.

## **Bromide Toxicity**

Bromide, a chemical compound found in high concentrations in seafood, displaces iodine just like Fluoride, which in turn can cause hypothyroidism. Also containing bromide are many commercially prepared breads, some vegetable oils, some citrus sodas, as well as pesticides, some plastics, some dyes, in carpets and mattresses, and more.

## **Iodine Insufficiency**

Since the atoms of thyroid hormones are composed of iodine, there’s a strong connection between inadequate iodine intake and hypothyroidism, whether from a lack of iodine in our diet, too much bromide and other toxins, or soil depletion in certain geographical areas.

## **Selenium Deficiency**

There is evidence that many global areas of soil have become depleted in their levels of the trace mineral selenium. And selenium is key for the conversion of the storage hormone T4 to the active hormone T3. Without adequate amounts, hypothyroidism can result.

## **Surgery to Remove the Thyroid**

When the thyroid gland is surgically removed, called a thyroidectomy, the result will be hypothyroidism. Removal is often the result of hyperthyroidism or cancer of the thyroid gland.

## **Pituitary Gland Failure**

When the pituitary gland fails to produce the Thyroid Stimulating Hormone (TSH), hypothyroidism can result, also called Secondary Hypothyroidism. A tumor on the pituitary gland can be one cause, as can a traumatic head injury or disease. Disorders of the hypothalamus, which influences the pituitary, can also cause thyroid hormone deficiency.

## **Head or Neck Trauma**

If any kind of accident caused trauma to the head or neck—even whiplash—secondary hypothyroidism can be the result, as can hypopituitarism.

## **Cellular Thyroid Hormone Resistance**

This rare condition is the result of your bodily tissues and cells being resistant to thyroid hormones and failing to respond. This peripheral resistance could be found in the pituitary gland, or in the outside tissues/cells. High doses of T3-only are required for treatment.

## **Pharmaceutical Drug Induced**

Lithium, used in the treatment of psychiatric disorders like bipolar, can result in a goiter and/or hypothyroidism by inhibiting the synthesis of thyroid hormones. Epileptic medications to reduce seizures and the prescription drug Amiodarone used to treat heart arrhythmias, plus Nitroprusside, Perchlorate, and Sulfonylureas can result in hypothyroidism.

## **Over consumption of Goitrogenic Foods like Soy**

When eaten in large quantities and consistently, this class of foods can promote goiters and hypothyroidism. They are mostly only a concern when served raw, as cooking may minimize or eliminate goitrogenic potential. Goitrogenic foods include cruciferous vegetables like cauliflower, brussel sprouts and cabbages; dark green leafy vegetables like kale; and root vegetables like turnips, radishes and rutabagas. Soy products can especially be a problem if eaten excessively. Eating in moderation is the key rather than eliminating them.

## **Menopause**

Thyroid problems are known to surface at periods of hormonal upheaval and are more common just prior to or during menopause. Statistics state that up to 20% of menopausal women develop hypothyroid problems.

## **Estrogen Dominance**

An excess of estrogen in the presence of low progesterone can cause thyroid hormone to be bound and unusable. This can explain why a percentage of peri-menopausal women experience symptoms of hypothyroid for the first time in their lives.

## **Candida**

Yeast Candida is normal in the digestive tract. But there can be an overgrowth from antibiotics, steroids, a high sugar diet,

birth control pills, pregnancies, diabetes and more. The immune system then attacks the candida, and the release of chemicals from the attack appears to affect thyroid hormone function.

## **Aging**

Hypothyroidism is one of the most undiagnosed results of aging and is common with the elderly. In fact, it's not uncommon to watch your elderly loved one become excessively and chronically sleepy, besides depressed and weak. A good discussion with your doctor about thyroid treatment can be helpful.

## **Fluoride, Mercury and Environmental Toxins**

There is suspicion that the widespread use of fluoride in our water and food may have played a role in the epidemic rise in hypothyroid, since fluoride can interfere with thyroid function. Mercury, especially from our silver fillings, can also play a role in hypothyroidism in susceptible individuals.

## **Cigarette Smoking**

Articles suggest that the toxins in cigarettes interfere with the proper functioning of your thyroid in a multitude of ways, resulting in either hypothyroid or hyperthyroid. Smoking also makes existing thyroid disease worse.

## **Hepatitis C**

The American Journal of Medicine reported in 2004 that if you have chronic Hepatitis C, a blood-born virus which affects your liver, there is an increased risk of becoming hypothyroid.

## **Down Syndrome**

Along with cardiac disease, it is common to see hypothyroidism in conjunction with Down Syndrome, especially cropping up in childhood.

## Autism

Though there is controversy whether autism “causes” or is the “result of” hypothyroidism, an association between the two is common enough to rate mention in this list.

## Additional Proposed Causes

- Chronically high cortisol from stress, which impairs the conversion of T4 to T3 as well as produces cell-clogging Reverse T3
- Family genetic history of thyroid problems
- Tonsillectomy
- Accumulation of Iron in the thyroid gland (10% of those with hemochromatosis)
- Any problems in the conversion of T4 to T3
- Born without a thyroid, also called Congenital Hypothyroidism
- Childhood hypothyroid, also called Cretinism
- Asthma and the use of inhaler/expectorants
- Polyunsaturated oils interfere with the release and transport of thyroid
- Excess Cysteine
- Nuclear Plant Exposure
- Candida (Yeast Overgrowth)

### ***Causes of Hypothyroid tidbits:***

- \* *Some cattle in Finland, Australia and the UK ingest goitrogenic forage, causing their milk to have a goitrogenic effect on humans, which in turn has caused hypothyroid symptoms.*
- \* *Daily consumption of soy can cause a goiter and hypothyroidism.*

# CHAPTER 9

## *When Your Thyroid Is Being Attacked: Hashimoto's Disease*

Becoming hypothyroid due to Hashimoto's Disease may be the most common reason for the condition. Also called Hashi's or chronic thyroiditis, it's an autoimmune attack on your thyroid and the result of your immune system going haywire. Some doctors believe Hashi's can also be caused from low iodine levels, as well as an antioxidant deficiency or gut issues.

The attack is against your own organs and tissue rather than bacteria and viruses. It would be akin to turning your sword on your fellow musketeers rather than on the dragons.

### **The progression of symptoms**

How do you know you have it? At first, you may not. The early stages of Hashimoto's Disease can be symptomless. As the attack progresses, the damaged cells of your thyroid become inefficient in converting iodine to thyroid hormones. Thus, your thyroid will compensate by becoming larger, also called a goiter. You can have a sore throat, or you may simply feel tightness when you swallow. In addition, you might not feel comfortable with that snug collar or turtleneck shirt.

Eventually, you will start to notice the same symptoms of hypothyroid, including poor stamina, easy fatigue, feeling

cold, gaining weight, dry hair and skin, constipation, etc. As it progresses, you may feel very hypo- one day, and very hyper another, which is caused by the destruction of your thyroid. Those symptoms can include anxiety, a racing heart, and palpitations. The hyper is caused by the release of thyroid hormones into your blood due to the destruction. The hypo- is caused by the lessening function of your thyroid due to the destruction.

If your doctor orders lab work, you might see variations in your results, such as being high in the free T3 or free T4 ranges one time, and low the next, or seemingly normal another time, making diagnosing and dosing by labs alone impossible.

The attack and gradual destruction of your thyroid gland can last for years, especially if you are in the hands of a doctor who does the wrong tests, or who thinks it's ok for your Hashi's to go untreated—the latter an all-to-common tragedy.

## Who has it?

Three out of four individuals with Hashimoto's seem to be women, but men are not immune. Most patients with Hashi's can have a strong family history as well as other autoimmune diseases. Others find themselves with the disease after the birth of a baby, whether they recognize the symptoms or not.

Nancy was surprised to find herself with Hashi's after she had given birth to her first child. She explains:

*Over the first 7 months after Eric was born, I was gaining weight rather than losing my pregnancy gain, and I couldn't get past feeling sooo sleepy and blue. My mom told me I had postpartum depression, and time would probably take care of it. So I grabbed a bottle of St. Johns Wort to tide me over. A few weeks after that, I was brushing my hair and noticed my neck looked thicker in the front.*

Nancy made a quick appointment with her doctor, and she received the diagnosis to explain her symptoms: Hashimoto's Disease.

Hashi's was discovered around 1914 when a Japanese physician named Dr. Hakaru Hashimoto described a newly revealed condition in which the thyroid enlarged, called a

goiter, and later atrophied. Dr. Hashimoto came from a long line of family members who practiced medicine, and he coined the phrase “Medicine is a benevolent art”. He was not recognized for his discovery until later.

## Lab tests

Since up to 95% of Hashimotos patients will have antibodies, it can be confirmed by two antibodies labs: **anti- TPO** and **TgAb**. The first antibody, anti-TPO, attacks an enzyme normally found in your thyroid gland, called the Thyroid Peroxidase, which is important in the production of thyroid hormones. The second antibody, TgAb, attacks the key protein in the thyroid gland, the thyroglobulin, which is essential in the production of the T4 and T3 thyroid hormones.

It is unfortunately common for a doctor to only do one test, *and you need both*, since you can be normal in one test and high in another! The anti-TPO can also be found in Hyperthyroidism, aka Graves, so you want to be sure it's Hashi's you have, not simply hyperthyroid. Patients have noticed that saliva does not always accurately detect Hashi's as well as blood tests do.

Occasionally, a doctor will choose non-treatment of your high antibodies, letting it run its course until it “stabilizes”. That's like saying *Enjoy feeling like crap for years*. Additionally, if you let the antibodies run high, which equates to a strong autoimmune attack, you can run the risk of autoimmune disease spreading to other areas of your body.

## Hashimotos treatment

Patients usually treat Hashi's the same way one treats hypothyroid—with thyroid medication. Even on a T4-only treatment, you can have some success in stopping the attack and lowering your antibody levels if you raise high enough. But patients who switched to desiccated thyroid noticed even better results, especially if they dosed by symptoms rather than labs, and also raise high enough. If you do have Hashi's, you may have to insist to your lab-obsessed doctor that you need to raise your desiccated thyroid according to the elimination of symptoms, not labs.



Why has the use of thyroid hormones stopped the attack in many patients? I suspect part of it has to do with your immune system. An antibodies attack on your own tissue is, in essence, your immune system going haywire. When you give yourself the thyroid hormones that your body lacks, you then *improve* the health of your immune system, which in turn decreases the production of the crazy antibodies. Whatever the reason, thyroid patients repeatedly find that holding low doses of thyroid hormones can continue to feed the attack, whereas the higher doses finally stop the attack. That's why it can be crucial for a Hashimoto's patient to raise their thyroid medication sooner than later, inching your way up to the amount that works.

Some randomized placebo-controlled studies suggest that taking Selenium, an essential trace mineral, could help lower the high levels of antibodies, especially the anti-TPO. Recommended doses are 200 - 400 mg daily. But patients have learned that it's meant to be taken in addition to desiccated thyroid, not by itself as a treatment.

Certain patients have noted that their antibodies were present for years even after they had countered the attack with thyroid hormones. But patients on desiccated thyroid have found that antibodies greatly fall if they dose high enough.

Improving one's Vitamin D levels are crucial for Hashi's patients, since D promotes healthy immune function by regulating your "T lymphocyte cells". One group of the latter, called your "T Helper cells", are called Th1 and Th2. Hashi's patients will tend to be dominant in one or the other. Dr. Kharrazian has written a book and articles for further reading.

Pregnancy can be a strong precursor to developing Hashi's, since the increased activity of your immune system can either worsen an autoimmune disease you already have, such as thyroiditis, or cause it to appear. Other researchers suggest that menopause has the same trigger.

## **Low Dose Naltrexone (LDN) and Hashimotos**

LDN is an FDA-approved medication that falls under the classification of "Modulators of Opioid and Receptor Activity." And when taken in low doses—1.5 mg as the recommended

starting dose for Hashimotos patients, and taken before bedtime—has been shown to effectively treat Hashimotos.

In many first-hand reports by Hashimoto's patients, besides medical studies, LDN has either slowed or halted the progression of the autoimmune attack. It works by boosting the immune system, which implies that autoimmune activity corresponds with a poorly functioning immune system. Hashimotos patients have reported sleeping better, relief from muscle pain, better digestion, softer skin, lessening of depression, and a lowering of antibodies, plus more. The better results can take longer in some patients than others. 4.5 mg is the maximum recommended amount.

The internet has many good information sites about LDN in the treatment of Hashimoto's, and patients have used this information to educate their doctors about its use.

## **Removing Gluten from your diet**

Just as your antibodies may start attacking your thyroid, they can also attack a substance you consume found in wheat and wheat-similar products: gluten. Grains with gluten include wheat, rye, oats, spelt, barley and others, and can be found in breads, cereals, pasta, sauces, spices and many processed foods. The latter autoimmune attack is known as Celiac Disease, or CD, and the result is inflammation throughout various parts of your body, as well as damage to the intestines, resulting in poor absorption of nutrients.

Why do both Hashi's and CD go hand-in-hand for many? Turns out that thyroid cells and gluten are a bit alike in structure. So if any gluten you consume ends up in your blood, it's going to be assaulted as well, which keeps your body in a state of attack and can make the Hashi's attack even worse.

To distinguish the autoimmune Celiac disease from simple gluten intolerance, ask your doctor for the tests for antibodies against the Gliadin in gluten, Endomysium in the sheath of your muscles, and Transglutaminase in your intestines. There are also tests you can order yourself in Addendum D. Some patients can also turn to a biopsy of the small intestine to confirm Celiac.

But even gluten intolerance with Hashimotos can make you miserable.

So what's the solution with this unfriendly connection? To completely avoid gluten in your diet. In fact, some avoid the tests mentioned above and simply remove gluten from their diet for a few weeks to see if they find improvement. The improvement becomes a "bingo!" See pages 189-192.

## **Iodine and Hashimotos**

Iodine use with Hashimoto's can be a controversial subject among thyroid patients. Some report finding themselves with thyroid antibodies which they never had before iodine use.

Others report a worsening of antibodies they already knew they had. Still others positively report that the use of iodine decreased their antibodies, and if they try to lower their iodine supplementation, their antibodies increase.

With many Hashimotos patients who succeed with the use of iodine, it was due to supporting nutrients, which also assist in toxin detoxification caused by iodine use. Those nutrients include Vitamin C (2000-5000 mg), Selenium (200-400 mcg), Unrefined Sea Salt (1/2 tsp a day), Magnesium (400 mg) and B-vitamins with an emphasis on B2 and B3.

As a Hashimoto's patient, your choice to use iodine should come after your own research and wisdom. There is a good iodine group on Yahoo (see patient group listings and URL's under the Resources heading towards the back of this book).

## **How is Hashitoxicosis related to Hashimotos?**

You might call Hashitoxicosis the big mama of the thyroid autoimmune disorder, because you not only have the two antibodies anti-TPO and TgAb, but you also have the Graves Disease antibodies, called TSI, or Thyroid Stimulating Immunoglobulin antibody. The TSI antibody attacks the receptor for the TSH, or thyroid stimulating hormone, then mimics it, causing your thyroid to overproduce thyroid hormones.

A person with this condition has the two opposite spectrums of thyroid disease going on: Hashi's, which leads to hypothyroid, and Graves, which leads to hyperthyroid. And the swings caused by the multiple antibody attacks can be aggravating. It has been suggested that you dose according to symptoms, i.e. use desiccated thyroid or T3 during the hypo- phase and nothing during the hyper phase. It's difficult, nonetheless.

Another treatment that patients report as successful is with the use of Low Dose Naltrexone mentioned before this.

## **Accompanying problems**

Since Hashi's is an autoimmune disease, patients can be at risk to have other autoimmune diseases, including Celiac disease, Pernicious Anemia (vitamin b12 deficiency), and an autoimmune attack of your adrenals. Also, literature states Hashi's can go hand-in-hand with Type 1 Diabetes in susceptible individuals. If you have Hashi's, you can also have food sensitivities and a candid problem.

## **Bacterial cause of Hashimotos**

Some rare cases of Hashi's may be the result of exposure to particular pathogen (i.e. bad guy) bacteria. The Clinical Microbiology and Infection journal reported in 2001 that there may be a connection between bacteria called *Yersinia enterocolitica* and certain Hashi's. You can be exposed to these bacteria via tainted meat, unpasteurized milk, untreated contaminated water, or even from the poor hygiene of a food handler. The treatment of choice is with an antibiotic like Doxycycline. Ask your doctor to prescribe a stool lab to discern if you have been exposed to these bacteria.

If your Hashi's is not the result of a bacterial infection, or you don't find success with the antibiotic treatment, patients believe that Hashimotos can be controlled successfully if you treat with desiccated thyroid, eliminate gluten, and raise according to the elimination of symptoms, first and foremost.

**Hashimoto's Tidbits:**

- *Thyroiditis is a group of disorders that all cause attack and inflammation of the thyroid, and Hashimotos falls into this group. Some use the term Hashimoto's and Thyroiditis interchangeably.*
- *Both of two thyroid antibodies need to be tested, not just one.*
- *Vitamin D deficiency will increase your risk of developing Hashimotos disease, say many research studies.*
- *Many antibodies lab results will show a low number, even without having full blown Hashimotos. If that number is close to the top of so-called normal, time to be concerned.*

# CHAPTER 10

## Join The Yaya Hypohood Psychiatrist Club

*Please accept my resignation.  
I don't want to belong to any club that will accept me as a member.*

*~ Groucho Marx*

Never was a club membership so automatic, vast and dubious as one you might belong to right now along with millions of other women and men worldwide. And how did you acquire this cheeky membership? By being on a T4-only medication like Synthroid, Levoxyl, Eltroxin, Oroxine, or generic levothyroxine, and/or dosed by the TSH lab result, and/or being told by well-meaning but uninformed and robotic doctors that you need

- To be on antidepressants
- To be on anti-anxiety medications
- To be on lithium (which interferes with thyroid function)
- To see a therapist or psychiatrist
- To submit to Electric Shock Therapy, as happened to my own mother

So, because you've always been led to believe that *your doctor knows best*, you've made one of a few choices:

1. Dutifully filled your prescription and popped your anti-depressant, anti-anxiety or other psychotropic pills,
2. Visited your counselor, psychotherapist, psychologist or psychiatrist, or
3. Learned to live with it and coped and coped again. And it's all been in spite of the fact there was a far better medication and treatment which would have prevented the need for most of the psychotropic pills and therapist visits in the first place. Just as easy as that.

Yet, we were never told.

So along with our physical symptoms of fatigue, poor stamina, dry skin, hair loss, easy weight gain, aches and pains, and/or feeling cold when others were warm...we as a group have had to deal with one or more mental, emotional and psychological symptoms of continuing hypothyroid due to many decades of a lame treatment or unrecognized adrenal dysfunction.

They include but are not limited to:

- Depression
- Anxiety
- Excessive fear
- Bipolar mood swings
- Rage
- Ruminating thoughts
- Chronic irritability
- Paranoia
- Confusion
- Concentration problems
- Memory problems
- Obsessive/compulsive disorders
- Mental aberrations
- Brain fog

It's not uncommon for thyroid patients to exclaim that their psychological symptoms can be far more difficult and debilitating than the physical symptoms. Yup, having less stamina than your friends is one thing, but being dependent on yet another medication, or carrying the stigma of an emotional/mental disorder, is another. It's a travesty.

Susan, a vibrant chef who chose to stay home when her second child was born later in her life, had been on 0.150 mcg Synthroid for 3 years. She stated:

*When I first got on Synthroid, I thought I was going to feel a lot better. My doctor regularly tested my TSH and found what he said was my blue ribbon dose. Instead, the depression I had before I got on was increasing, and I was so depressed that you couldn't pry me from the house. I didn't enjoy any activities with my husband or my little ones. Holidays were miserable for me, and if I was forced to prepare my house for company, it would take me hours to become motivated enough to do the job. I kept begging my doctor to see if there was another problem going on, and all he said was "go see a therapist." I saw two more doctors, and all I got from them were free samples of antidepressants and prescriptions for more.*

Mark S., a college student, had symptoms which went beyond depression. He explained:

*I can't say my life while on 0.125 Levoxyl was horrible, but I sure wasn't able to keep up with my running buddies anymore. And something else started to change: I kept having all sorts of worrisome thoughts in my head. They would start the minute I woke up and continue until I went to bed. I couldn't concentrate, couldn't study, and my thoughts would just roll and roll and roll until I felt like I was going mad. Felt stupid and alone.*

When hypothyroid patients like Mark and Susan complain to their doctors about their symptoms, onto their doctor's favorite antidepressant, anti-anxietal, lithium, or bi-polar med they go--beginning with the freebies on the shelf from the friendly and suited pharmaceutical rep. Sound familiar?



## Point the finger at a low free T3

Your membership in the club began when your physician or psychiatrist failed to understand or consider that mental, emotional or psychological disorders can be due to inadequate levels of free T3, the most active thyroid hormone. The low level can exist *years* before the hypothyroid is detected due to your doctor's reliance on the faulty TSH lab result. Or it will be present on T4-only medications where the body is dependent on the conversion of T4-to-T3 alone, receiving no direct T3 as is acquired from desiccated thyroid medication.

Doctors push you into the club by failing to check thyroid function with the correct tests, the free T3 and free T4, and not realizing what the results may mean. *Or, they fail to recognize the symptoms of adrenal fatigue / HPA dysfunction or to prescribe the correct diagnostic tests, such as the 24-hour adrenal saliva test.*

And unfortunately, with their medications come more problems you don't want. Many antidepressants are made up of fluorinated molecules, meaning you are getting the very toxic substance, fluoride, which may be making your thyroid condition worse. Additionally, your medications can clash with other medications, or leave you with other classic side effects, including weight gain.

## Depression and hypothyroid

In my contact with hundreds of thousands of thyroid patients, I have repeatedly observed that chronic low grade depression, and occasionally full blown depression, is the most common side effect of being on the inadequate thyroxine, T4- only medications. In fact, you can almost guarantee that a large body of patients on thyroxine have been encouraged to be on, or are on, anti-depressant medications. There are some clinical studies which show that long-term use of antidepressants can stress your adrenal function, as well.

Additionally, it doesn't take a rocket scientist to presume that a certain percentage of individuals with depressive disorders who aren't yet on thyroid medications are, in fact, undiagnosed hypothyroid due to the erroneous "normal" range for the TSH lab or the failure to use the correct labs.

My own mother is a classic example of the tragedy of poor assessment or treatment of thyroid function. After she battled clinical depression and anxiety for years while on T4, she relinquished all control of her health to a doctor who gave her Electric Shock Therapy—a treatment which only slightly lessened her chronic depression and dulled her memory and intelligence for the rest of her life. She also remained on the antidepressant Elavil for a lifetime, along with her Synthroid: the Mutt and Jeff of thyroid treatment.

### **T3 and your emotional health**

Dr. Ridha Arem, in his book *The Thyroid Solution: A Mind Body Program for Beating Depression and Regaining Your Emotional and Physical Health*, states:

*Scientists now consider thyroid hormone one of the major “players” in brain chemistry disorders. And as with any brain chemical disorder, until treated correctly, thyroid hormone imbalance has serious effects on the patient’s emotions and behavior.*

Thyroid hormones thyroxine (T4, as the storage hormone) and triiodothyronine (T3, as the converted and direct active hormone) not only play a part in the health of your metabolic, endocrine, nervous and immune system, they in turn have an important role in the health and optimal functioning of your brain, including your cognitive function, mood, ability to concentrate, memory, attention span, and emotions.

On her website, Christiane Northrup, MD writes about T3 as a neurotransmitter which regulates the action of serotonin and other transmitters against excessive anxiety. She also mentions that low T3 can be implicated in depression<sup>19</sup>.

Dr. Barry Durrant-Peatfield, in his book *Your Thyroid and How to Keep It Healthy*, explains:

*Brain cells have more T3 receptors than any other tissues, which mean that a proper uptake of thyroid hormone is essential for the brain cells to work properly.*

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<sup>19</sup> [www.drnorthrup.com/womenshealth/healthcenter/topic\\_details.php?topic\\_id](http://www.drnorthrup.com/womenshealth/healthcenter/topic_details.php?topic_id)

Peatfield feels that up to one-half of depression is due to unrecognized hypothyroidism. This figure could be higher when you consider the large number of thyroid patients who are suffering from depression while on the inferior treatment of T4-only medications.

One of my favorite articles, *Hypothyroidism Presented as Psychosis: Mxedema Madness* Revisited by Heinrich and Grahm, MD's, outlines the relationship between thyroid disease and psychiatric and psychologic manifestations. They emphatically state:

*There is little doubt that thyroid hormone plays a major role in the regulation of mood, cognition and behavior. As a result, persons with thyroid function frequently experience a wide variety of neuropsychiatric sequelae. The range of physical and psychiatric presentations and their potential subtle manifestations make hypothyroidism a diagnosis that is easy to miss. Behavior changes may occur in the absence of classical physical signs and symptoms of the disorder. Pg. 265, Primary Care Companion Journal of Clinical Psychiatry 2003; 5*

## The additional problem of low cortisol

Just as patients have come to understand the connection between their depression and undertreated hypothyroid, along comes a new wrinkle to be addressed in many: adrenal fatigue/HPA dysfunction.

Adrenal fatigue means you don't produce enough cortisol, which in turn results in thyroid hormones pooling in the blood and not making it to your cells. It is essential that the common combination of hypothyroid and adrenal fatigue be recognized and treated.

Nell had been on Synthroid for eight years, antidepressants for seven, and had many problems. She heard about desiccated thyroid and made the switch. She explained:

*I finally made my way up to 2½ grains, held it for five weeks, and found resolution of some my physical symptoms, but I still had others. When I did labs again, my free T3 was over*

*the range, and I felt it was just normal for ME. But just as before, I was still uncomfortable with leaving my house. And my tendency to overreact to things my friends would say to me had not changed. I was calm one moment and raging the next. I also felt like my friends were ganging up on me, and I truly felt one in particular, who has always been an outspoken type of woman, meant to cause me harm. I really thought that! I then heard about low cortisol, did the adrenal self-tests, and it was obvious that they pointed to adrenal fatigue, but I still had to overcome even my fear about THAT.*

Nell is an example how low cortisol levels can be an additional culprit, even when you feel you are adequately treated for your thyroid. Her high free T3 along with her psychological symptoms were also suspicious, since low cortisol results in cell receptors failing to adequately receive thyroid hormones from the blood. The emotional and behavioral symptoms from having low cortisol, which in turn keeps you hypo-, can include the need to avoid leaving one's house, seeking peace and quiet, inability to tolerate stress, low tolerance to loud noises, rage, emotional ups and downs similar to bipolar, panic, obsessive-compulsive tendencies, hypersensitive to the comments of others, phobias, delusions, suicidal ideation, and more.

## **What's the solution?**

Patients and certain informed doctors have learned that if certain mental health symptoms become obvious, either by you or friends who notice them, it's time to find a doctor who will test your free T3. It's also prudent to add the two thyroid antibodies labs, as well as your cortisol levels at four key points during the day via the saliva test. Keep in mind that most doctors will tend to order a urine or blood test, but patients have repeatedly found the 24-hour saliva test to give the best information.

If you find your free T3 mid-range or below, or if you have an autoimmune attack going on against your thyroid (which will make labs useless since you can swing between hypo- and hyper), you need to discuss the addition of Cytomel (synthetic T3) to your current thyroxine medication. There is a growing body of doctors and researchers who are using T3 as an adjunct to anti-depressive

therapy, since improving your T3 levels can raise brain levels of the neurotransmitters serotonin and norepinephrine to the optimal level they need to be.

Even better, according to the experience of many, is switching to desiccated thyroid which gives you the entire complement your own thyroid would be giving you—T4, T3, T2, T1 and calcitonin. There are numerous testimonies of patients ridding themselves of chronic depression and other emotional problems when they dosed high enough with desiccated thyroid to put their free T3 towards the top of the range (in the presence of adequate cortisol).

If you find your free T3 at the upper end of the range, or above range, yet mental health issues persist, the missing piece in the puzzle may be the adrenals. Chapters 5 & 6 provide information patients have learned in the diagnosis and dosing of adrenal insufficiency.

## **Real life success stories**

**Joan's story:** I was frequently told by my doctors over a ten year period that I needed to be on antidepressants. I resisted because I didn't want to be like my mother, who'd been on them for years. I finally caved in and tried two brands. One hardly touched my depression. The other worked for three months, then it caused morning depression so bad that I thought I would die. I felt doomed. One particular day, a friend told me about Armour, which her aunt had switched to recently. Since I had been on Levoxyl for more than 10 years, I was curious. I finally found a doctor to put me on Armour, and even as low as 2 grains, I noticed that my depression was disappearing. I am now at 3¾ grains and my depression has totally disappeared.

**Nancy's story:** Well, I was once on Synthroid for 14 years. My worst times appeared right before my periods, when I would think everyone was ganging up on me. My marriage was in shambles as a result. I also had severe depression during the winter, which I believe is called Seasonal Affective Disorder. I couldn't function during the winter, and my monthly cycles caused me so many problems that I couldn't function most months. Now that I am on

Armour. my life has really changed. I can think again. I feel 100% better. I don't dread my periods anymore because my emotions have leveled out. And best of all, I bleed half as much!

**Lou's story:** For years, I watched my older sis Deb struggle with fatigue. Her doctor finally figured it out and put her on Synthroid. Deb seemed to do better, but she still had depression, and her hair kept getting thinner and thinner. Then it was my turn! I became hypothyroid about four years after my sister. But I did some research on the internet, found out about desiccated thyroid, and got on Naturethroid. Once I got over 3 grains, I felt SO much better and could run circles around my sister. Luckily, she is looking into getting off her Synthroid and onto desiccated thyroid like me.

**Judy's story:** This is embarrassing, but I've always been very obsessive-compulsive. There have always been certain ways I have to do things around the house, and I'm anxietal if my husband does it differently. When it thunders really loud, I feel better by reciting the alphabet over and over. I've been on Levo thyroid for 16 years, since I was 18. I have never had the energy of my friends. I heard about Janie and a group she has, and found a doctor to put me on Armour. He refused to let me go higher than 2 grains, so I found another doctor 1½ hours away from my house. She let me go higher. And to my shock, I am not anywhere NEAR as OCD as I've always been. I am thinking that all along, it was a thyroid symptom that the Levothyroid never took away! I am so excited.

**Michelle's story:** I think I have been to more than nine doctors in the past few years, and every one of them told me I needed to be on antidepressants. It only made me cry even more, as I read so many bad stories about them. I am now on Armour, and no longer feel depressed or anxietal.

**Lucille's story:** I was depressed for eleven years before discovering that I had a thyroid problem—just like my mother. I had been on a variety of antidepressants for at least six of those eleven years. When I was on Levoxyl and later Synthroid when I moved and changed doctors, my depression got even worse.

Because my husband kept liquor in the house, I started drinking. I'm now on 4½ grains desiccated thyroid, and my depression has lifted! Who would have guessed. Yes, I stopped drinking and feel better than I have in a decade.

**Mrs. R's story:** I have always had problems with what they call suicide ideation. I wasn't actively suicidal, but I sure have been passively suicidal, thinking about it and being careless. I've been on antidepressants off and on, too, including Elavil, which turned me into a zombie. I finally got my doc to do some blood work. He said I was hypothyroid—put me on Levothyroxine. It did NOTHING for me. NOTHING. I then joined an internet thyroid support group, heard about desiccated thyroid and switched. I am actually feeling better than ever! I'm excited what more will happen to me as I raise my free T3 levels.

**Steve's story:** I am a student in college. Ever since I was about 13, I've had episodes of mania and depression. I could barely get along with my mother, and I spent many days living with a strict aunt and uncle. I thought weight lifting would make a difference, but it didn't. My doctor put me on Synthroid when I was a senior in high school. It didn't help at all. And when I went away to college, I had trouble keeping friends due to my mood swings, besides being dog-tired and I ached. The university doctor had me raise my thyroid medication. It did nothing. I heard about Armour and started it. I had a terrible reaction to it, and through getting on the internet, found out about adrenal fatigue. I am currently on Cortef, started my Armour again, and am actually feeling like a even-keeled human being again. Thank you.

**Pam C's story:** I have had depression for 18 years and even had to spend time in a mental hospital in Dallas. I was on Levoxyl, too. Three times during that time, when I questioned if my thyroid problem might be causing all this, all I got was "no" because my TSH was normal and I needed to see a psychiatrist and stick with my antidepressants. When I got a computer for Christmas, I started doing research using Google and found out that a low T3 causes depression, and that Armour might stop it since it has

direct T3. I was dancing, let me tell you. I promise that the first day I took it, I started to feel better. I wish I had known about this years ago. Not one doctor told me anything. Not one.

**Cindy's story:** I can only speak for me, but since I started on Armour three months ago, I still get depressed at times. But now, I seem to be able to pull myself out of it! The depression is also much lighter. I am looking forward to more progress.

**G.R's story:** I was diagnosed with hypothyroid 8 years ago and put on Synthroid. Six years ago, I was diagnosed with Body Dysmorphic Disorder and I've been on several psychotropic medications that did not help. It was my mom who told me what she had heard about Armour, so I found a doctor who would let me get on it, then switched to a DO who would let me get higher. I am now on 5 grains, plus 27½ mg Cortef (hydrocortisone). I am shocked to report that I no longer have depression or anxiety attacks, and I don't feel hideous anymore. It's a miracle really.

## Listening to the success stories

Those stories above only barely touch the surface of success by those who moved from T4-only medications and dosing by the TSH... to a T3 treatment or desiccated thyroid.

They also dosed not by the TSH, but by the elimination of symptoms first and foremost, using the Free T3 and Free T4 as guides.

So don't despair if you are a bonafide and oh-so-privileged member of the Yaya Hypohood Psychiatrist Club. You can switch your membership to an inactive status by getting on desiccated thyroid, or at the very least, adding T3 to your T4-only medication.

### ***Yaya Hypohood tidbits***

- \* *Many of the above stories were with the use of Armour before it was reformulated. Since then, patients find they need to chew it up for better results.*
- \* *Bipolar may have an even stronger connection to adrenal dysfunction, besides hypothyroidism.*





# CHAPTER 11

## *The 10 Biggies: The most common mistakes*

Bloopers, blunders and miscalculations: all common when treading a new path. Patients who've walked the better path with thyroid or adrenal treatment have experienced all of them. This chapter presents mistakes and solutions in the hope that you won't have to make them, too.

My own learning curve was having a doctor start me on  $\frac{3}{4}$  grain Armour (before it was reformulated in 2009). Not a huge mistake, since it can be wise to have a low introductory dose to help your body adjust to the direct T3, a very powerful thyroid hormone.

But what she did next was a biggie. She left me on that  $\frac{3}{4}$  grain for nine weeks before I saw her again. A huge mistake! Due to the feedback loop, my pituitary gland thought my thyroid was now producing a bit more hormones, and via the TSH, it told my actual poorly-producing thyroid to produce even less. Thus, my hypothyroid symptoms came back with a vengeance. The first evidence was a menstrual period that lasted twice as long as usual. And oh was I tired!

**1. Staying on a starting dose too long:** Just like my example above, it's common for doctors to put you on a safe low

starting dose, but leave you on it far too long, i.e. until the next six-week or eight-week follow-up. The result? Your body thinks your thyroid has suddenly produced more hormones. And via the TSH from your pituitary gland, your thyroid is told to decrease its already-lowered production. So you become even more hypothyroid than you started.

We have learned that though one grain is a beneficial and safe amount to start with for most, especially in the presence of strong adrenals or adequate cortisol, it's not a good amount to remain on much longer than a week or two without raising by at least one-half grain. Patients continue with  $\frac{1}{2}$  grain raises every two weeks. Some may find an optimal amount at 2 grains, but most others will need more, and to slow down as they approach two to three grains to give the T4 in desiccated thyroid a full four to six weeks to fully build.

If you have to start as low as 30 mg, either due to your doctor's lead or because of adrenal issues, it's even more crucial to begin raising by the end of the first week. With adrenal dysfunction being treated with cortisol, the raises may need to be in smaller amounts, even if close together.

**2. Not raising high enough:** This is a common occurrence which can happen anywhere along the way of your desiccated thyroid dosing. Patients will be on inadequately low doses due to:

- a) Being held on a starting dose too long.
- b) Being bound by the directives of a TSH-obsessed doctor.
- c) Failing to get a raise of desiccated thyroid until the "next lab work", which can be weeks and months away.
- d) Following an inaccurate Synthroid-to-desiccated thyroid conversion equivalence chart, which leaves you underdosed.
- e) Being forced to lower a dose due to a high free T3 with continuing hypo-symptoms, which is a sign of low cortisol and/or low iron, and needs treatment. (See Ch. 5 and 6.)
- f) Being afraid to go higher.

For example, a patient makes her way up to 1 or 1- 1/2 grains (60 - 90 mg) and notices good improvements, yet fails to raise enough to remove all symptoms. So she will see the return of some of her hypothyroid symptoms, or find herself with old ones. Or, a patient makes his way up to two grains and notices little improvement. And it's common to think that desiccated thyroid isn't working. In reality, it may simply mean a patient isn't on enough!

It's estimated that the daily average secretion of thyroid hormones in individuals without thyroid disease is 94 – 100 µg T4 and 10 - 22 µg T3<sup>20</sup>. Since US-made desiccated thyroid has 38 mcg of T4 and 9 mcg of T3 per one grain (60 or 65 mg), the above amounts equate to about three to five grains of desiccated thyroid. And sure enough, a large body of hypothyroid patients have noticed repeatedly that their optimal dose ends up in the three to five grain range or higher before ridding themselves of symptoms, especially in light of digestive issues.

It can also be very wise to check adrenal function, since low cortisol can prevent thyroid hormones from making it to the cells. With low cortisol, you will still have symptoms in the three-to-five grain dosage range, or even be unable to reach that area due to hyper-like symptoms.

**3. Thinking hyper symptoms are only from taking too much:** Granted, a patient can take too much desiccated thyroid and become hyper, revealed by a higher heart rate or blood pressure, sweating, anxiety, shakiness, etc. Check with your doctor if those occur. But if you have hyper- like symptoms on doses less than three grains, there's a good chance the cause is from either struggling adrenals (i.e. not enough cortisol, or too much) and/or low ferritin/iron. Both of these situations cause thyroid hormones to build high in the blood without getting to the cells, as well as raised RT3 levels. So it can be wise to get your cortisol levels checked via a 24- hour adrenal saliva test (see Chapter 5), ferritin with a full iron panel (see Chapter 13), and your RT3/Free T3 labs to find the ratio. (See Chapter 13.)

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<sup>20</sup> [www.thyroidmanager.org/Chapter2/2-text.htm](http://www.thyroidmanager.org/Chapter2/2-text.htm), (Bernard A. Rousset, PhD., and John T. Dunn, M.D., 13 April 2004)

**4. Failing to multi-dose:** It's a common feature of many popular medications to take a pill once a day. Those on any T4-only medication, which is a storage hormone with a long life span, do just that. Some thyroid patients who take desiccated thyroid also take it once a day, in the morning. But over time, it's possible the once-a-day strategy may backfire, leaving you with afternoon fatigue and/or stressed adrenals. Since a healthy thyroid will give you thyroid hormones throughout the day as you need it, patients have learned to replicate that natural process by multi-dosing their desiccated thyroid to better distribute the direct T3. The direct T3 is immediate, peaking about two hours after you take it, and then beginning its fall with a shorter life-span than T4. So dividing your dose makes sense.

For example, a person on three and one-half grains might take two grains in the morning, one grain by noon or early afternoon, and half grain by mid-afternoon. Twice a day dosing is even more common, such as morning and early-to-mid afternoon.

Another benefit of multi-dosing is that it's far less stressful on your adrenals, which is especially crucial if you have sluggish adrenal function and still trying to find your optimal dose of cortisol supplementation.

**5. Swallowing thyroid with estrogen, calcium or iron:** Unfortunately, when you swallow your desiccated thyroid at the same time you swallow foods or supplements which contain calcium, iron, or even estrogen, a certain amount of the direct T3 in your thyroid pill will become bound and unusable in the mix. So patients have learned to avoid swallowing these at the same time they take their desiccated thyroid, and instead take these products three to four hours apart from their thyroid. It is acceptable to have food in your stomach, though, when you take your desiccated thyroid, as long as they don't contain the above.

When avoiding calcium supplements, you have to watch out for calcium-fortified orange juice, as well as taking calcium carbonate over-the-counter products like Tums or Rolaids. Even though certain brands of desiccated thyroid aren't made as a sublingual tablet, patients have discovered some, like Erfa's

Canadian “Thyroid”, to work well sublingually, i.e. placing the tablet under your tongue and forgetting about it. Why? Because nearly 100% is utilized when you do it sublingually since most of it goes directly to your bloodstream vs. the large amount you lose when swallowing due to stomach acids and liver processing. Some patients who switched to sublingual administration discovered they could take slightly less than when they swallowed, and get the same great results!

**6. Thinking desiccated thyroid is not working when an issue arises:** The brilliance of desiccated thyroid is that it contains direct T3, also called *triiodothyronine*. It’s the most powerful of the thyroid hormones. Because of that power, it can initially aggravate certain conditions as they are exposed to the T3.

An example is my benign heart condition called Mitral Valve Prolapse. I noted that with each raise, I would have consistent palpitations from the mitral valve. But within five days, my heart would calm down and come out stronger. Another patient got itchy when she got on desiccated thyroid, and was so determined to blame it that she got off, got back on Synthroid...and is still itchy. We have since learned from a few patients that the itchiness went away as they continued to raise their desiccated thyroid.

**7. Adding T4 or T3 to desiccated thyroid too soon:** Most patients report they achieve excellent health, stamina and energy on desiccated thyroid alone, especially when they have taken the time to raise and find their optimal dose. But some patients and their doctors like to add either synthetic T4 or T3 to their desiccated thyroid dose to achieve a certain result. The challenge is in not adding it too soon; otherwise you miss out on the benefits of the optimal amount of the T4, T3, T2, T1 and calcitonin. Instead, patients have learned that if they had simply increased their dosage, desired results might have been achieved.

In some instances, a patient may suspect they have thyroid hormone resistance when six to seven grains of desiccated thyroid is not doing the job. At this point, they add T3, also called Cytomel

by brand name and by prescription, to their dose to achieve results and resolution of symptoms. Additionally, since most patients on an optimal dose of desiccated thyroid often have only a mid-range T4, some are adding a small amount of T4 to raise the level. But you have to be careful not to raise it high enough to cause an excess of Reverse T3. It's all an individual call.

**8. Going up with dosages too fast:** I remember vividly the following experience on an internet thyroid patient group: a male patient was prescribed desiccated thyroid, and on his own, he raised it one grain per week, reaching six grains by the sixth week. Ouch. He started to find himself heavily overdosed with symptoms to match, including high anxiety and shakiness. He had to cease taking any thyroid for a few weeks to allow the T4 to fall. His doctor then restarted his dosage at one grain, and a more prudent dose raise began.

Namely, patients have learned that after being on a starting dose for about two weeks (one grain, for example), they can start raising their dosage by ½ grain or so every two weeks. They also note that when they near three grains, it's time to hold each dose at least four to six weeks to allow the buildup of the T4, and to see its T4-to-T3 conversion results.

**9. Paying too strict attention to lab results:** Unfortunately, there are decades of a disturbing and lazy pattern where doctors treat by ink spots on a piece of paper (called lab results) rather than using medical intervention based on patient clinical presentation, a.k.a. symptoms. Lab results are interesting and good adjuncts to the full spectrum of dosing. But patients know firsthand that symptoms are the horse pulling the cart, not the other way around!

For example, to react to a high free T3 lab result, without noticing continuing hypothyroid symptoms, will result in overlooking a key symptom of adrenal dysfunction or of low iron--the pooling of thyroid hormones. Or, to dictate a decrease in thyroid medications because of a below-range TSH, without noting continued hypothyroid symptoms as a result of the decrease, will backpedal a patient into hypothyroid hell.

**10. Not understanding the problem of excess Reverse T3 (RT3):** A growing body of patients who find out they have either dysfunctional adrenals, low ferritin/iron, or other chronic issues also can make too much RT3 from T4, and their Free T3 levels drop as a results. Also, it's suspected that excess RT3 competes for the same cell receptors as T3, and thus, prevents T3 from entering cells and doing its magic. And the challenge then becomes finding a doctor who understands that it needs to be tested and treated. Testing involves doing the RT3 and Free T3 labs at the same time, then finding the ratio. Treatment involves either lowering desiccated thyroid while treating the issues causing excess RT3/lower T3, or being on T3-only for a minimum of 8-12 weeks while other issues are discovered and treated. See Chapter 13 for details.

An important summary of this chapter is to enter your doctor's office expecting respect for your own knowledge based on information in this book and on the web, as well as your intuitive and subjective wisdom about your own body. Don't give your power away, and you can avoid mistakes that other patients have made!

***Ten Biggies Tidbits:***

- \* *Since hypothyroidism can result in "brain fog" and mistakes in treatment are a result, find a trusted friend or loved one to help you go through this book. Also consider taking this book to the appointment with bookmarks.*
- \* *Failing to chew up some thyroid medications before swallowing, like the 2009 Armour or others with excess cellulose, can make the thyroid less effective.*
- \* *Thinking your doctor knows more than you do, and failing to demand respect for your own subjective experience and wisdom in the doctor's office, can keep you sick.*





# CHAPTER 12

## T3 is The Star Of The Show

*The man who follows the crowd will usually get no further than the crowd. The man who walks alone is likely to find himself in places no one has ever been.*

*~ Alan Ashley-Pitt*

Most legendary bands have a lead singer who draws the most attention of their fans, like Kurt Cobain of Nirvana or Brian Wilson of the Beach Boys. And when it comes to the ensemble of thyroid hormones, the one with the lead gold star on its door by thyroid patients is T3, aka triiodothyronine (try-i-oh-doh-thy-ro-neen).

T3, an iodine-based hormone, is part of a family of five well-known performing hormones produced by a healthy thyroid: T4, T3, T2, T1 and calcitonin. Together, they all work as smoothly and harmoniously as a well-tuned chorus for the optimal performance of your body. The storage hormone T4 is approximately 80 - 93% of the total thyroid production, with T3 coming in at 7 - 20%, and smaller amounts of T2, T1 and calcitonin.

### **T3 deserves the academy award**

T3 is the most biologically active, life-giving hormone made by your thyroid, being around four to eight times more powerful than the storage hormone T4. It makes its appearance in your

body two ways: first, primarily from the conversion of T4 to T3 by the removal of an iodine atom, or second, by being made endogenously, meaning directly.

T3 positively affects every cell, tissue, and organ in your body. It plays a critical role in your energy levels, stamina, immune strength, hair and skin health, brain function, metabolism, liver function and body temperature. T3 has a special role in the health of your heart as well as your emotional and mental well-being. The presence of direct T3 (as compared to T3 from conversion), along with the synergistic interaction between the all the T's and calcitonin, is exactly why a large and growing body of patients are finding natural desiccated thyroid gives them far more benefit than being on a T4-only medication. At the very least, even being on a synthetic T4/T3 combination is far sweeter than T4 alone.

## **T3 and the health of your heart**

Studies frequently reveal the strong connection between the thyroid hormone T3 and its influence on a healthy heart rate, good blood pressure and vascular resistance—the latter which refers to your body's ability to push blood through your circulatory system. T3 plays a strong role in normalizing high cholesterol levels. Conversely, low levels of T3 can coincide with a poorly functioning heart rate, rising blood pressure, and atherosclerosis, or the hardening of your arteries. Low T3 is associated with rising cholesterol.

This strong connection between the T3 thyroid hormone and your cardiovascular health has not gone unseen by thyroid patients over the years, even if they didn't understand what they were seeing. At first, Cathy was stymied by what happened to her 68-year-old mother when she had heart surgery, but came to an important conclusion ten years later.

She explained:

*On my mother's side of the family, I never heard any stories about heart problems. My grandparents died from old age. And my mom's weight gain wasn't unusual to me since my grandmom had been a little overweight as the owner of a bakery. Yet when my mother was in her late 60's, and had*

*been on Synthroid about 35 years, she had to have a balloon angioplasty. I was told it was done to open up a narrowed artery from her rising cholesterol. And it seemed really odd to me. But I figured it out a decade later when I joined a thyroid group. A lot of other thyroid patients were talking about their own high cholesterol when on those T4 pills. And others mentioned heart problems. One girl said she was in heart failure in her 40's while being on Synthroid, and it was totally different now that she was on desiccated thyroid! It was like a light bulb went off in my head about my mom.*

A familiar pattern is true for a large body of hypothyroid patients who are on T4-only medications as they age: unflinching weight gain, rising cholesterol and heart issues. Even in 1976, when Dr. Broda Barnes wrote *Solved: The Riddle of Heart Attacks*, he clearly saw a strong connection between hypothyroid and heart disease. And since patients have found their hypothyroid to continue while on T4-only medications, rising cholesterol is the norm as you age, which in turn can lead to cardiovascular disease. Conversely, those who switch to desiccated thyroid with its direct T3, and who raise not by the TSH lab result but according to the complete elimination of symptoms, report a firm lowering of their cholesterol levels and much improved cardiovascular health. Sharon tells her inspiring story:

*I had been on Levothyroxine for 16 years when I heard about Desiccated thyroid from a thyroid support group on the internet. I was so impressed that when I went back to our family doctor to talk about my labs, I was going to insist on switching. He's an older doctor and knew about natural thyroid. Lucky me, because he was very friendly about me being on it. This was also the appointment where I found out that my cholesterol was 305! I picked up my pills that afternoon, and started the 158 Stop the Thyroid Madness next day. I told him how I wanted to raise it based on what I had learned from other people in my shoes, and he gave me enough until the next appointment, and asked me to report in every three weeks. When I tested my cholesterol again several months later, it was down to 198!! I did nothing different other than switching to natural thyroid!*

Sharon's story is similar to thousands of thyroid patients who make a switch to a desiccated thyroid product. And a visit to one of numerous internet thyroid patient groups attest to cardiovascular improvement in a large body of thyroid patients. To see a plethora of articles on the connection between T3 and heart health, just use your favorite search engine and type in *triiodothyronine cardiovascular*.

## **T3's role against depression**

Feeling chronically sad? Have problems feeling excited about your life? Studies show a strong relationship between your free T3 level ("free" referring to the available and unbound of the total T3) and the occurrence of depression and feelings of emotional numbness; namely, the lower your free T3 levels, the higher the incidence of depression and related emotions of apathy. Conversely, the more optimal your free T3 levels, the better your emotional health.

As outlined in Chapter 10, chronic depression is quite common for those on T4-only medications where the only T3 patients get is from conversion. But when patients switch to a desiccated thyroid treatment with its direct T3, and achieve a free T3 towards the top of the range (and in the presence of healthy or adequately-treated adrenals), you hear a multitude of subjective reports about the improvement and/or removal of the chronic depression. Patients then report a successful end to antidepressants.

Biologically, thyroid hormones, especially the active and life-giving T3, interact with brain receptors and make the brain more sensitive in favor of norepinephrine or serotonin. Norepinephrine, a neurotransmitter, plays a role in your alertness, memory and the balancing of your mood. Serotonin, another neurotransmitter, regulates mood and emotion.

According to numerous studies which report on the use of T3 in combating depression, the improvement occurred whether the patient was considered hypothyroid or not. One is left to question whether the diagnosis against hypothyroid was accurately made. The occurrence of undiagnosed hypothyroid is widespread, perpetual and odious due to the obsessive reliance on the faulty

TSH and total T4 lab results. So in reality, there might be a vast percentage of clinically or chronically depressed patients who are quite hypothyroid, whether on T4- only medications or not.

With T3 added to your anti-depressant, it's proposed that the T3 accelerates the effects of the anti-depressant. Even more concisely, it may be treating the very reason for the depression in the first place—a low free T3 due to hypothyroid. There are simply numerous examples of patients whose depression completely resolved when their hypothyroid was correctly diagnosed and optimally treated with desiccated thyroid, or at the least, a synthetic T4/T3 combination or T3 alone.

Bottom line, the addition of T3 in the treatment of depression has a good track record of being safe, practical, and inexpensive, whether taken alone or combined with T4 as in desiccated thyroid, or simply as an adjunct to antidepressants. And it works.

In the October 2000 issue of *The Annals of Pharmacotherapy* 34 (10):1142-45, the following abstract is a good example of what occurs with many hypothyroid and depressed patients when they have a thyroid treatment that includes direct T3:

**OBJECTIVE:** To describe a patient with longstanding depression and hypothyroidism who had marked mood improvement only after triiodothyronine (T3) was added to her thyroxine (T4) replacement therapy.

**CASE SUMMARY:** A 50-year-old white woman had a long history of depression and documented hypothyroidism since 1991. Despite treatment with T4 with dosages up to 0.3 mg/d, she continued to be depressed, have symptoms of hypothyroidism, and have a persistently elevated thyroid-stimulating hormone concentration. Addition of a low dose of T3 to her regimen resulted in significant mood improvement.

**DISCUSSION:** The relationship between hypothyroidism and depression is well known. It is possible that this patient's long history of depression may have been a consequence of inadequately treated hypothyroidism, due either to poor patient compliance or resistance to T4. Nevertheless, her depression responded to addition of a low dose of T3 to her regimen. This case emphasizes the importance of screening depressed patients for

hypothyroidism. Her clinical course also suggests that depression related to hypothyroidism may be more responsive to a regimen that includes T3 rather than to replacement with T4 alone. This is consistent with the observation that T3 is superior to T4 as adjuvant therapy in the treatment of unipolar depression.

**CONCLUSIONS:** Depressed patients should be screened for hypothyroidism. In hypothyroid patients, depression may be more responsive to a replacement regimen that includes T3 rather than T4 alone. Therefore, inclusion of T3 in the treatment regimen may be warranted after adequate trial with T4 alone.

Alongside the numerous study results showing the efficacy of T3 treatment in depression, there are also several references to the successful use of T3 in the treatment of anxiety, Body Dysmorphic Disorder, Bipolar, Obsessive-Compulsive, Suicide Ideation, to name a few.

## **Two scenarios which might require T3-only treatment**

No matter how beneficial patients have found desiccated thyroid to be in the complete reversal of hypothyroid symptoms, there can be two problems that a certain percentage of patients experience, even when they have adequately treated their adrenal fatigue: thyroid hormone resistance, or chronically high levels of Reverse T3. In these cases, the use of T3 in conjunction with desiccated thyroid, or alone, is a necessary treatment.

### **• Thyroid Peripheral Tissue Resistance/ Impaired Response**

Imagine that your vehicle's gas tank has plenty of fuel, but your car is unable to make use of it. That is akin to thyroid hormone resistance or impaired response. Both are rare conditions.

Tissue resistance is caused by a proposed defect of the thyroid hormone cell receptors, and/or problems in the pituitary tissue sensitivity. Using labs may not help with this condition, since you may appear to have adequate levels, yet no response and continued hypo-symptoms.

An impaired response can mean your body does nothing with

T4, and it becomes toxic in your body.

If you find yourself with Thyroid Peripheral Tissue Resistance, you'll need supraphysiologic high levels of desiccated thyroid and added T3 until symptoms are removed. It's important to work with your doctor closely to find the right amount with it being too much. You might notice that even high doses don't lower your TSH, which is why it's important to watch your symptom removal first.

If you have a toxic response to T4, being on T3-only is the treatment of choice. Examples of T3 are Cytomel by King Pharmaceuticals, with the generic name of liothyronine sodium. Paul Robinson, UK author of *Recovering With T3: My Journey from Hypothyroidism to Good Health Using the T3 Thyroid Hormone*, has this condition.

### • Too high levels of Reverse T3 (RT3)

In any situation where one's body needs to conserve energy, such as illness, surgery or an accident, the thyroid will properly convert any excess T4 to the inactive Reverse T3 in order to lower one's T3 levels and to concentrate on the problem. Even having the flu can cause this conversion change.

But sometimes, one's body makes far too much RT3. For example, if your body has inadequate levels of iron, or low or high levels of cortisol, and even low B12, your body will convert the T4 to excess RT3...and chronically.

Or, when you are confronted by an excess of emotional, physical or biological stress, your adrenals will rightly respond by producing extra cortisol to help you and your body cope. But when the cortisol production becomes too high for too long in response to chronic stress, minerals like selenium become poorly absorbed and T4's ability to convert to T3 becomes impaired. To clear out the excess T4, your thyroid will convert it to additional Reverse T3. Even beta blockers can block T4 from converting to T3, and produce excess RT3.

Additionally, if through chronic long-term biological stress (*such as being on T4-only*) your adrenals finally become fatigued, the end result is low cortisol. And low cortisol will cause thyroid hormones to pool in your blood rather than interacting well with



your cells. Again, to clear out the excess T4, as well as lower your current levels of T3, your thyroid will convert it to additional Reverse T3. And when your T4 converts to far too much RT3, it has some inconvenient side effects.

Picture running water heading towards a drain, but the water is also picking up a mess of twigs and branches along the way, until the drain becomes so clogged with twigs and branches that no more water can fall down the drain. This is akin to what happens when your body is making excessive RT3—it lowers the amount of T3 that can interact with your cells.

The above scenarios with either low ferritin/iron or an adrenal problem, or both, are why it's imperative to adequately treat your adrenals and low ferritin/iron. But because that can take time, you may need to do something about the potential RT3 problem, which patients have discovered is quite common.

## **How to discern high RT3**

There are two clues to discern if you have an RT3 problem:

1. The first clue comes with the subjective experience of feeling toxic as you try to raise your thyroid medications. Or, as patients report firsthand: not quite feeling right, strange reactions, not getting benefits like others do, a low temperature, anxiety, etc.
2. Another clue comes with your most current lab results. If you find yourself with a high-in-the-range Free T4 and a low-range free T3, it strongly implies that conversion is heading the direction of excess RT3 while lowering Free T3. In fact, say patients, if your Free T4 lab result is over 1.4 in the range, you might want to be concerned.

If either of the above are suspicious, your next step is doing two specific labs at the same time: the Free T3 and Reverse T3. You are looking for the ratio between the two. Testing the RT3 alone may not give the confirmation you need, since it can look normal, but not be in relation to your free T3. Much of our knowledge was obtained from an article by Dr. Kent Holtorf.<sup>21</sup>

*Ideally, your ratio will need to be 20 or higher to reveal healthy low levels of RT3. If you only used a total T3, your ratio to the RT3*

would be 10 or higher for healthy low levels of RT3.

In determining the ratio, you will be dividing the Free T3 by the RT3 (i.e. Free T3 ÷ Reverse T3). But this can be difficult, since the majority of lab results of the two come back in different measurements. The easiest way to determine your ratio is by using the on-line calculator here: <http://www.stopthethyroidmadness.com/rt3-ratio>. You will plug in each of your results, and each of the measurements.

Or, if you enjoy the challenge of math or metrics, here are four examples on how to obtain the ratios:

- 1) If both RT3 and Free T3 are in pmol/L (or pg/mL), multiply the free T3 by 1000, divide the Free T3 by the RT3.
- 2) If the RT3 is nmol/L and Free T3 is pmol/L, divide the Free T3 by the RT3
- 3) If the RT3 is ng/dL and Free T3 is pg/dL, divide the Free T3 by the RT3.
- 4) If the RT3 is pg/mL and Free T3 is pg/dL, multiply the Free T3 by 100, then divide Free T3 by RT3.

*Note: There are labs listed in Addendum D where you can order your own, if need be, to later discuss the results with your doctor and how you want to treat it.*

## How to improve your ratio of Free T3 over RT3

There are at least three ways to lower your chronic Reverse T3 levels, which improves your ratio:

1. **Treating the causes:** Low iron is a common cause, as is an adrenal problem (too high or too low cortisol) or even low B12. So by raising your iron and B12 levels to optimal, or improving your adrenal issues, any of those can help improve your Free T3/RT3 ratio. Some feel the need to lower the desiccated thyroid, which lowers the T4...and all the while treating the causes. Changing your lifestyle can be key, as well, such as greatly improving your food choices, facing and

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21 (the Journal of Clinical Endocrinology & Metabolism 2005; 90(12):6403-6409) treating alcohol or smoking addictions, and avoiding high and chronic stress.

**2. Using a good liver cleanse/support product, plus Selenium:** Since the bulk of RT3 is made in the liver, some have lowered their high RT3 by using a good liver cleanse, especially those made from Milk Thistle seeds. You may have to DOUBLE the recommended amount to get the lowered RT3. Milk Thistle can lower ferritin in some, so patients are adding iron to their supplementation, or raising what they are already on. Also make sure your Milk Thistle comes from the seeds. Milk Thistle not from the seeds can have an estrogenic effect. Also, there is a lot of research which proves that low selenium can increase RT3. So patients supplement with 200-400 mcg Selenium to stop that fact.

**3. Going on T3-only:** T3-only dosing can have its challenges since you have no storage T4 to do the job of providing T3 for you. But it can work, and is especially important if you haven't succeeded in lowering your chronic RT3 in any other way. Cytomel is a very popular brand of T3, as is Mexican Cynomel, for patients. Not everyone agrees that being on T3-only is necessary as much as they agree that correcting the causes is the key.

## **Switching to and dosing with T3-only**

If you choose to use T3-only for thyroid treatment, whether to feel better while treating the causes of high RT3, or because of cellular problems with T4, it can be wise to start on low amounts, raise in small amounts, and multi-dose it while working on improving other issues.

Generally, many patients have preferred starting on a low total dose, such as 12.5 mcg split to 6.25 in the morning and 6.25 four hours later (or 10 mcg, split into 5 and 5.) Some start on 20 or 25 mcg without a problem, split to three or four doses every three hours apart. Like the mitral valve prolapse I had, which makes one's heart sensitive, starting on these lower doses gives the heart time to adjust, if needed. The multi-dosing times can be figured out by paying attention to symptoms. Some notice the T3 wearing off sooner than four hours, so move to three. Others do fine on a four hour spread. Some patients add the final dose to bedtime, assisting detoxing, cellular repair, and better sleep.

Nothing about the above dosing is an exact science. It can be

an individual trial and error process. Bottom line, you're trying to replace with T3 at the same time T4 is falling (if you were once on T4-only or T4/T3 treatments. Additionally, if your RT3 was high, your cells receptors might still be overrun with RT3 and thus, you won't be receiving all the T3. So you may feel more hypo-at times, or your temps may go a bit weird after a raise.

Every 5 to 7 days, after establishing the multi-dosing routine mentioned above, patients continue to add T3 to first the morning dose, then the next, and so on. Most will go no higher than 25 mcg on any individual dose; some need to stay lower. Again, you are adding at the same time your T4 levels are falling. As long as the additions of T3 aren't causing a racing heart or a temp above 99 degrees, patients have benefitted from raising every five days or so. If some do have any issue, raising in lower amounts is recommended, as is more multi-dosing. Many patients on T3 seek a five-times-a-day dosing, which includes the bedtime dose. Some do less but good cortisol levels are needed.

It's also been experienced by some adrenal patients that taking 25 mcg of T3 at any one time can cause anxiety. You can discern what is going on by taking your blood pressure when the anxiety is happening. If it's still good, and you can maintain it from sitting to standing, you may be on too much HC, which thrusts too much T3 into your cells like a canoe rushing through a fast-flowing river.

*CAUTION: if your ferritin/iron is low, patients discovered the need to work on raising it while staying on low dose T3. Also, if adrenals are dysfunctional, proven by the 24 hour adrenal saliva test or extreme symptoms, and you are unsure if you have reached your optimal amount of cortisol, even 25 mcg of T3 can be too much for you. Choosing half that amount, divided into two doses, may be wiser.*

## **What amount of T3 is enough**

Final doses will vary from individual to individual. After rising to about 50-75 mcg of T3, some hold further raises to see if an optimal dose has been achieved and the TSH has been fully suppressed. Others feel right going a little higher to fully suppress

any further production of RT3, and to achieve a good amount. You will be able to judge when to slow down by your temperature and pulse, i.e. if they go too high.

By observations of symptoms and labwork, many patients can achieve an optimal amount at 50 mcg, give or take, with the right multi-dosing, which is key. A few may need to move higher, such as up to 75 mcg. A minority have needed to go higher. It's whatever amount that removes problematic symptoms, maintains a good heartrate, and brings the afternoon temperature to 98.6F, give or take. It's all individual.

If someone feels they want to clear the high RT3 with T3-only before they are able to correct the issues causing it, it seems to take 8 - 12 weeks depending on the severity of one's RT3 levels. Some patients theorize they may need higher amounts of T3 than needed in order to bombard the cell receptors and to clear out excess RT3. This will then become too much, and patients report a temporary and sudden high heartrate/blood pressure and adrenaline surges. T3 is then reduced quite rapidly.

Optimal dosing seems to put the free T3 is at the top of the range or slightly over (in the presence of strong adrenal function or adequate cortisol supplementation). Having a higher range FT3 can be necessary while on T3-only to compensate for the inability to receive T3 from the conversion of T4.

It's also been noted that when patients are optimal on T3, and around that 8-12 week period, their adrenals seem to begin healing. How was that discovered? By suddenly noting high cortisol symptoms on the amount of HC they once needed. Perhaps getting rid of excess RT3 removes adrenal stress.

## **Lab Work on T3**

Once on T3 long enough and at the right dose, you will see a low TSH and a low Free T4. The lowered T4 means less RT3, as well. When optimal on T3-only, some patients find themselves with a Free T3 lab result slightly over the range without symptoms of hyper. This higher level of free T3 suppresses the thyroid from making T4. It also makes up for the lack of conversion of T4 to regular T3.

## **Brands and kinds of T3**

All T3 products are synthetic T3-only, and the names can include Cytomel by King Pharmaceuticals, Cynomel (especially the Mexican version), Tertroxin used in the UK and Australia, Thybon in Germany, plus others. T3 is also called sodium liothyronine. There may be other brand names, plus simply generic versions. Cytomel is often a favorite of many doctors in the US as well as patients. Some of the others may be weaker, and it can be good to talk to patients (see the Resources at the end of this book, and under Patient- to-Patient Groups) to find out what they like and what they don't.

Slow-release/time-released T3 is another variation, recommended by Dr. Denis Wilson, who coined the term Wilson's Syndrome to define high RT3 mostly caused by stress or illness, or also called Euthroid Sick Syndrome. In thyroid patient experience, time-released T3 works well for some, and lousy for others, since its absorption rate can vary and it's hard to know if you getting enough at certain times. Even Dr. John C. Lowe felt that time-released T3 is not a wise choice, since calcium in the intestines can bind the T3 which is hanging around longer due to being 'time-released'.<sup>22</sup> So you'll have to figure out what is right for you.

Multi-dosing Cytomel has been quite successful and preferred for most.

## **How long to stay on T3-only**

The length of time patients stay on T3 is an individual call, based on discovering and treating lingering issues which caused the excess RT3 in the first place. Those factors can include gluten intolerance, candida, low B12, low ferritin/iron, cortisol issues, Lyme disease, and more. With confidence in the treatment of any of those issues, plus staying on T3 for a minimum of 12 weeks to fully rid oneself of RT3, you may be ready to consider a slow tapering of the T3 while adding back in desiccated thyroid. Work with your doctor when lowering T3 and adding desiccated thyroid. Since one grain of desiccated thyroid (with both direct T3 and

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<sup>22</sup> <http://www.drloewe.com/QandA/askdrloewe/t3.htm>

conversion of T4 to T3) is roughly equivalent to 25 mcg T3, the latter can be dropped and one grain replaced.

If the unresolved cortisol issue still remains, you may have to stay on the T3 until you resolve it and before re-starting on desiccated thyroid.

## **The half-life of T3**

Half-life refers to the amount of time it takes for half the T3 to be gone from your bloodstream, leaving only the other half. And thyroid patients have discovered that the half-life of T3 depends on how hypothyroid you are, i.e. the more hypo- you are, the shorter the T3 lasts, which is why you have to dose no more than 4 hours apart when first on T3 or desiccated thyroid. Conversely, the more adequately treated you are, the longer the T3 lasts, which subjectively can seem like 24 hours after your last dose! The author of this book, who has been adequately treated on desiccated thyroid, notices that even when she forgets her morning dose, she'll feel fine until mid- afternoon. At that point, she may notice sleepiness, and then realizes "Oops. I forgot to take my morning dose!"

### ***T3 tidbits:***

- \* *Graves antibodies can cause high RT3.*
- \* *Patients have also lowered high RT3 with the use of Milk Thistle supplements made from the seeds.*
- \* *T3 raises your Sex Hormone Binding Globulin (SHBG), and men may need to look into testosterone supplementation as a result.*
- \* *T3 supplementation can cause estrogen levels to drop a bit.*
- \* *25 mcg of T3 is roughly equivalent to one grain of desiccated thyroid.*
- \* *T3 helps prevent liver cancer (<http://cancerres.aacrjournals.org/cgi/content/abstract/60/3/603>) and can repair and rebuild.*
- \* *T3 peaks in approximately 2 hours with desiccated thyroid, and in approximately 4 hours on straight T3.*

# CHAPTER 13

## *Important Odds And Ends Related To Being Hypothyroid*

Like a cat walking gracefully along the edge of a fence, healthy bodies are always in a state of balance. The fit action of one organ can affect the stable reactions of another in a perfect equilibrium.

On the other side of the coin, when one organ becomes diseased or there are bodily deficiencies, imbalance occurs. And in hypothyroid patients, it's common to discover problems in other parts of the body that need to be addressed. These include low ferritin and iron, B-12 deficiencies, Celiac or gluten intolerance, high cholesterol and/or iodine deficiency. I have also added a section on Radioactive Iodine treatment for Graves hyperthyroid as well as Hypopituitary and Thyroid Cancer.

### **Low Ferritin/Low Iron**

As thyroid patients have been changing to a more optimal treatment containing T3, a large body have been surprised to discover they may have low iron levels, whether with Ferritin, your storage iron, or other iron levels. Ferritin is an iron storage protein found in one's cells, meant to bind to iron, store it, then release it for use. You can have "normal" iron serum levels, yet a low storage of iron. So measuring ferritin is to measure how much iron your body has set aside for you for safe use.



Additionally, patients may find they have low serum iron, low % transferrin saturation level (the % of iron bound by transport protein), and high TIBC (revealing iron deficiency.)

### • Cause of iron deficiency

The cause of low iron or ferritin is multi-faceted and related to our hypothyroid condition. First, having a lowered metabolism from hypothyroid decreases the production of hydrochloric acid in your stomach, which in turn leads to a malabsorption of iron. Continued hypothyroid also keeps your body temperature low, which causes your body to make fewer red blood cells. Additionally, in women, being hypothyroid can result in heavier periods, which causes more iron loss and less storage iron. The lower your iron levels, the faster your storage iron is used up. Though it's most common with women, men are not immune from having low iron.

Phil, a thyroid, adrenal and pituitary patient who specializes in men's issues, states:

*I had a lot of problems and couldn't pinpoint what was holding me back. My testosterone levels on meds were good; my HC meds were working; my thyroid levels were better; I didn't get sick anymore in the winter.*

*Still, I went to bed fatigued and got up fatigued. I had a high pulse rate over 110 bpm at rest. I was out of breath just from getting a glass of water. Sometime, I felt as if I would pass out. I had mucus stuck in my throat just at the bottom of my neck, and had to hack over and over to get it up so I could breathe.*

*To be honest with you, I felt like I had congestive heart failure. Here I am on Florinef for low aldosterone levels, yet I was holding water so bad that I needed to take water pills every other day. It made no sense.*

*Finally, the women on a group I belong to pushed me into testing Ferritin. My levels come back below normal. I was at 18 and the low end of the range is 29. After taking 212 mg of elemental iron from Ferrous Fumarate 324 mg my Ferritin come up to only 24 after taking this for 7 weeks. Important Yet*

*my breathing is so much better. I fly up and down stairs without getting out of breath. I stopped taking meds to help me breathe, as well as a med for reflux. I have dropped 22 lbs since using iron while being on the Weight Watchers program, while before, I gained on Weight Watchers. I am now getting exercise and not housebound. My feelings of depression have lessened, and hell, my sex life is better. I asked my doctor why my iron levels are so low, and he feels it's the hypopituitary problem with so many low hormones.*

The slide into low ferritin can be symptomless, but it eventually becomes the precursor to being anemic as your hemoglobin levels fall in your blood, which are the molecules in your blood which transport oxygen to your tissues. And once the latter occurs, you can then have symptoms (see below).

The move from low ferritin into anemia causes symptoms so similar to being hypothyroid that many patients make the wrong conclusion that their desiccated thyroid is too low or not working. Excessively low Ferritin/low iron can also make it difficult to continue raising your desiccated thyroid!

Biologically, insufficient iron levels may be affecting the first two of three steps of thyroid hormone formation by reducing the activity of the enzyme thyroid peroxidase, which is dependent on iron. Iron deficiency, in turn, may also alter thyroid metabolism and reduce the conversion of T4 to T3, besides modifying the binding of T3, i.e. making a certain amount of T3 unusable. Low iron can produce too-high levels of RT3. Additionally, low iron levels can increase circulating concentrations of TSH (thyroid stimulating hormone).

Iron, in addition to iodine, selenium and zinc, is essential for normal thyroid hormone metabolism.

### • **Symptoms of low ferritin/low iron**

Low iron mimics the hypothyroid state, and can include depression, achiness, easy fatigue, weakness, feeling cold, faster heart rate, palpitations, loss of sex drive, foggy thinking and breathlessness on exertion, etc. The author of this book found it hard to even climb the stairs in her house, and noted excess burning in her legs from a build-up of lactic acid.

**• Why you need a full iron panel with the ferritin**

Many patients discovered that inflammation of any kind in your body, which can be common with low thyroid and especially low cortisol, can lead to a so-called normal or high ferritin lab result. For that reason, asking your doctor to order a full iron panel, which can include ferritin, can give you a better picture. The full iron panel with ideal results are:

- TIBC (in the bottom quarter of the range)
- Serum Iron (around 110 or higher for men)
- % Saturation (25-45%, with men in the upper area)

TIBC (Total Iron Binding Capacity): this test is measuring the ability of another protein, the transferrin, to do its job in carrying a small amount of iron to your liver, bone marrow and spleen. The TIBC will go up when your total iron stores are too low. You are looking for a level closer to the lower area of the range.

Serum iron: this test is measuring the small amount of your circulating iron which is bound by the transferrin mentioned above. It's a small amount since most your bodily iron is bound to proteins like transferrin and ferritin. Should be close to 110.

% Saturation: this test is measuring your serum iron divided by your TIBC. You want your saturation to be 25 – 45%. Lower and it points to low iron levels.

If your serum iron or saturation is low, even with a normal ferritin, you will need to think about iron supplementation.

Want to confirm inflammation, which drives ferritin high? You can ask your doctor about the C-Reactive Protein test (CRP) as well as the Erythrocyte Sedimentation Rate test (ESR) or the White Blood Count (WBC).

**• Lab example of why ferritin by itself isn't enough information**

When this patient got her lab results back, she found out why the ferritin isn't enough. You will note that her ferritin result is perfect---between 70 and 90 is the goal for a female. But her serum levels and saturation were far too low, revealing her ferritin level had risen in response to inflammation. These results will mean symptoms similar to hypothyroid.

- Ferritin: 82
- Iron, Serum: 49 (range was 35-155, and result should be around 110)
- Iron Saturation: 18 (range was 17-55, and result should be 25-35% at the minimum, no higher than 45%)
- TIBC: 333 (range was 250-370, and result should be no higher 300 at the most)
- UIBC: 266 (range was 150-372, and result should be no higher than 200 at the most)

- **How to prepare for your ferritin and iron panel**

At the minimum, you'll want to be off iron supplements for 12-24 hours minimum. Some doctors have recommended iron fasting for five days.

- **The solution to having low storage iron and/or low iron**

Once you have verified low ferritin or low iron with a blood test (i.e. a ferritin below the 50's or iron saturation below 25% or so) your next step is to supplement your diet with iron. Iron in our foods comes in two forms: heme and non-heme. Heme iron is better absorbed, and can include lean meats, poultry and fish. Liver has the highest concentration, but if that's on your list of "ugh", any meat will help.

Sources of non-heme iron foods, which are not absorbed quite as well as the heme meats, include spinach, almonds, baked and kidney beans, molasses, and several iron-fortified flour and grain products. Other sources of iron include dried fruit, peas, asparagus, leafy greens, strawberries, wheat germ, raisins and other nuts.

But most patients, under their doctor's guidance, have found it necessary to reinforce their diet with iron supplements.

### • Kinds of iron supplements

The most common over-the-counter inorganic iron supplements, oral or liquid, include *Ferrous Sulfate*, *Ferrous Glutamate*, *Ferrous Fumarate*, etc. *Ferrous Sulfate* is usually the cheapest, and some patients add Vitamin E to their supplementation since Ferrous Sulfate may slightly deplete your levels of Vitamin E. It's recommended to take it with food to prevent nausea.

*Ferrous Gluconate* and *Ferrous Fumerate* may cause fewer symptoms, and both are milder on the stomach and absorb well. Ferrous Fumerate is often prescribed by doctors in a stronger form. Iron can also be administered intravenously in a hospital setting via your doctor's dictate.

*Ferrous Bisglycinate*, a chelated amino acid iron supplement which can be easy to tolerate and non-constipating, is a type of iron that many patients swear by. One popular brand name is Bluebonnet.

*Liquid iron* is a good choice if you use the vegetable-based (non-heme) type. Beware of liquid iron that is animal based (heme)—it can temporarily blacken your teeth, as it did to the author of this book.

It's recommended to take Vitamin C, which helps the absorption of iron and counters free radicals produced by iron. At the very least, drink down your iron tablets with orange juice or a Vitamin C rich drink. Also taking a mineral supplement can assist the absorption, as can B-vitamins with an emphasis on B6, as studies have shown B6 helps raise ferritin.

Avoid excess soy (which you should be doing anyway as a thyroid patient) which decreases absorption of iron, as does black tea, zinc, calcium, high fiber, and even eating excess egg yolks. Use moderation in any of these foods, supplements or liquids.

### • How much to take

It's important to read the label of any kind of iron you take to discover how much "elemental iron" is in each tablet. The total mgs on the bottle label don't often represent the elemental iron within. Hypothyroid patients have discovered it can take up to 150 - 200 mg total daily of "elemental iron", split and taken with

meals to prevent stomach upset, to help raise their low ferritin. Elemental iron represents the iron that's absorbable in the tablet.

The general goal is to get your ferritin to a minimum of 70 - 90 on your lab result. It can take months to achieve this goal. And especially if you are a menstruating woman, you may have to stay on iron, even if lower amounts, to maintain those levels.

*NOTE: liquid iron is far more absorbable than tablets, so patients discovered they can take far less.*

- **Seriously low ferritin or iron**

If your ferritin is in the teens, or your iron labs are seriously low, ask your doctor about either an iron injection or prescribing an IV iron infusion. Either will raise your iron levels far quicker—just a few weeks as compared to a few months from supplementation. The IV infusion does require an out-patient health facility and can be expensive. You will be monitored to prevent the rare anaphylactic shock.

- **If your TIBC is low along with low iron**

TIBC stands for “Total iron-binding capacity”, measuring the ability of iron to be bound in the blood in order to be carried where needed. In most patients in the presence of low iron or low ferritin, TIBC will be high. Some, tho, occasionally find it low. In this case, patients have learned to take much smaller amounts of elemental iron to prevent a high accumulation in the blood, such as 50-75 mg a day. Some may be able to handle 100 mg, but you will need to test your iron levels frequently to make sure you aren't getting too much. It will be slower to raise your low iron and low ferritin than those with normal TIBC.

- **Dealing with inconvenient side effects of iron supplementation**

Taking iron supplements can cause constipation or hard and small stools. In this case, taking a good magnesium supplement can be a wise counter, taken twice a day, until you find the amount

that softens your stools. There are also prescription laxatives that can help and are safer for longer use.

Since iron can bind thyroid hormones, patients have learned to do their desiccated thyroid under the tongue to avoid contact with the iron. Or, if you have to swallow both, you avoid doing them at the same time.

- **When Ferritin levels are back up**

Several patients have found out the hard way that their ferritin or iron levels can plummet all over again. So it may be wise to stick with a small dose of supplemental iron and/or eat iron rich foods, especially if you are female and still menstruating. Once into menopause, your ferritin levels may stay where they need to.

- **Rare conditions which can result in low Ferritin**

It's important to mention that there are some uncommon conditions that cannot be corrected by taking iron: *Thalassemia* and *Polycythemia Vera*. With *Thalassemia*, an inherited condition causing your body to make an abnormal form of oxygen-carrying hemoglobin, iron supplementation can cause an iron overload because of the missing gene in your hemoglobin. Blood transfusions can be necessary. *Polycythemia Vera* equates to having too many red blood cells, making your blood really thick. If your hemoglobin and hematocrit lab results are high, you'll want your doctor to check for the above conditions.

## **Vitamin B-12 deficiency**

B-12 is an essential vitamin for the health of your red blood cells and your nervous system, as well as the creation of DNA and cell division. It's mainly found in meat, poultry and fish, plus milk products and eggs. B-12 is released in your stomach by hydrochloric acid. Yet, because hypothyroid can result in low levels of hydrochloric acid, having a low level of vitamin B-12 can go hand-in-hand with hypothyroid because of poor absorption. Stress can also lower B12 levels. So it can be wise to have your

B-12 levels tested, especially since the deficiency anemia is gradual, and it can be more severe than your symptoms reveal.

When symptoms finally show themselves, they can include weakness and fatigue, confusion, balance problems, bruising, and paleness, as well as shortness of breath, feeling dizzy and a rapid heart rate. Later stages can result in a tingling in your extremities, called neuropathy, or a red irritated tongue and loss of taste. Low B12 can push your RT3 too high.

John Dommisse, MD of Tucson, AZ, in the article titled *Hidden Causes of Dementia*, feels that the “normal ranges” for B-12 deficiencies “are way too low.” If that’s the case, there’s potentially a large body of hypothyroid patients with Vitamin B-12 deficiency.

Ranges for B-12 considered “normal” will vary from country to country. Generally, you are striving for a result at the top of the range, if not slightly higher. Supplementing with B-12 can be helpful. Treatment from your doctor will usually involve Methylcobalamin, a pharmaceutical form of B-12 and taken by shot or lozenges.

Another more serious form of vitamin B-12 deficiency is called Pernicious Anemia, which is an autoimmune disorder and can be common for patients who have Hashimotos Thyroiditis, another autoimmune problem. Just as with a normal deficiency, your body is unable to absorb the B-12 from your digestive tract. Treatment consists of the tablets or injections.

## **Celiac or Gluten Intolerance**

Because autoimmune diseases can go hand in hand, there are a percentage of Hashimoto’s patients who also have Celiac Disease (CD or just Celiac), also called Celiac Sprue or Gluten Intolerance. This attack causes atrophy damage in the small intestine, and that, in turn, results in poor absorption of nutrients in the food you eat, which can lead to malnutrition and other maladies. Some individuals can have CD less severely than others.

Conversely, those with Celiac have a higher risk of having hypothyroid (besides diabetes or rheumatoid arthritis).



Estimates are that 10 - 14% of hypothyroid patients have Celiac, and it might be higher. Research proposes that if Celiac's control their disease by avoiding glutens, they can either stop a thyroid autoimmune attack, or prevent it from occurring!

Another important reason to mention Celiac in relationship to thyroid disease: when you are undertreated due to being on thyroxine, or if you are undiagnosed due to a doctor's over-reliance on the TSH range, your immune system is compromised, and that can lead to the very conditions which can trigger the autoimmune response, including oral thrush, vaginal infections or intestinal Candidiasis. These three can also develop due to an adrenal dysfunction.

Stress can cause Celiac to reveal itself, and eating certain types of storage protein, aka gluten, can set off the autoimmune response. Those glutens are found in wheat, rye, barley and even oats, as well as other related grain products. The Celiac genetic tendency can also be triggered by oral thrush, vaginal infections and intestinal Candidiasis, all which contain the same protein sequence as wheat gluten. Some patients find themselves with manifestations of Celiac Disease after the birth of a baby; others after an infection or surgery.

The Celiac Sprue Association website states that up to 1 in 133 have CD, and only 3% of those have been diagnosed! Other estimates are around 1 in 2000. There is also evidence that people of Irish or Swedish descent have the highest incidence. It is much more prevalent in lighter skinned individuals than in darker skin and in Asians.

### • **Symptoms of Celiac**

Symptoms of Celiac include bloating, muscle cramps, smelly gas, and diarrhea, and you can also have constipation, weight loss, anemia, chronic fatigue, weakness, or premature osteoporosis and even bone pain. You can also have projective vomiting, migraine headaches, tingling of hands or difficulty walking. If the autoimmune attack started early in one's childhood, it can result in a short stature, plus enamel problems on the teeth. Lactose intolerance can be common with many who have CD.

It is not uncommon to be misdiagnosed with irritable bowel syndrome, spastic colon, and Crohn's disease. CD also affects the central nervous system and can be similar to symptoms of Multiple Sclerosis. You will have CD your entire life, and it can wax and wane.

Three key tests to confirm the diagnosis include the anti-endomysium antibody (IgA EMA) and anti-gliadin antibody (IgA & IgG), and tissue transglutaminase (tTG IgA) or anti-reticulin. But patient recommended tests are the total IgA serum and tTG IgA. If a patient is IgA deficient, these two tests won't work and other testing will be needed. A gastroenterologist can also take a small intestine tissue biopsy, if necessary.

You can also simply remove gluten from your diet to see if your symptoms improve.

### • **Treatment of Celiac**

The treatment of Celiac is with a total gluten-free diet, which means eliminating any food products containing wheat, rye, barley and even oats, the latter which can have traces of wheat. But you have to be careful, because even other products can have gluten, including soy sauce from your favorite Chinese food restaurant and many processed foods. Believe it or not, some cosmetics contain gluten, as well as some household cleaners. Once you eliminate gluten from your diet, give the removal of Celiac symptoms time.

It also turns out that even rice and corn can be a problem for some with gluten issues due to contamination.

There are some prescription medications you can talk to your doctor about to help control it, such as Dapsone. But you may have to start low for your body to deal with the side effects of the medication. Most simply remove gluten from their diet.

Joseph Murray, MD, Ph.D., who has been one of the leading US physicians in the diagnosis of Celiac disease plus Dermatitis Herpetiformis, states that the damage done to your intestines with CD can be reversed in most cases by avoiding the gluten. The author of this book wonders if being on desiccated thyroid, which promotes a stronger immune system, can help promote

that healing when gluten is avoided, as well, as compared to those who are on thyroxine or who are undiagnosed due to their doctor's over reliance on the TSH range.

### • **Accompanying problems with Celiac**

Dermatitis Herpetiformis (DH) can often go hand-in-hand as a manifestation of Celiac. DH is a chronic and extremely itchy skin condition which is manifested by red bumps which can erupt into blisters, and those are mostly found on your elbows, knees, back, buttocks and even the scalp, though they can occasionally be found elsewhere on your body. Many patients with DH see it start when they are young adults. Like Celiac, it is controlled by avoiding gluten in your diet. Iodine in your diet can make it worse, according to some sources, so if you are supplementing with iodine, you might want to pay attention if it's affecting you or not.

Celiac "disease" refers to a damaged intestinal mucosa brought about by an inherited gene, and avoiding glutens can help control the disease. It is proposed that others can have sensitivity to gluten without damage to the intestines, and this could be simply called Gluten Intolerance.

## **High Cholesterol**

Remarkably, a large percentage of hypothyroid patients, especially those who remain on the inadequate T4-only treatment, have high cholesterol, or who will see it rise later in life. And sadly, the typical approach by their doctors is to see it as a separate condition from their hypothyroid.

Cholesterol is a soft yet waxy substance that hangs out with the fats in your bloodstream and is also found in your tissue and cells. And cholesterol is the substance from which estrogen, progesterone, testosterone, DHEA and cortisol are made. So cholesterol is positively essential for your balanced health.

But with hypothyroidism, cholesterol may not be adequately metabolized, resulting in an unhealthy buildup. And you can have a higher triglyceride level and low HDL— the good cholesterol.

The result is an increased risk for cardiovascular disease and a doctor who wants to put you on statin medications which are problematic in themselves, potentially causing memory problems, muscle weakness, and peripheral neuropathy.

The solution is to treat your hypothyroid with desiccated thyroid or T3 and dose by the elimination of symptoms, plus seeking a high range free T3 in the presence of healthy adrenals, or adequate cortisol support. There are numerous accounts of patients on desiccated thyroid who finally saw their cholesterol fall to healthy levels thanks to an improved metabolism.

## **Iodine deficiency**

When patients chat in thyroid groups, it's not uncommon to see them ponder why there is such an explosion of hypothyroid problems worldwide. We know there can be many causes, and one in particular is iodine-deficient soils from which some food is grown. In addition, the amount of toxins we are all exposed to in our environment, including fluoride, bromide, chloride, chlorine and mercury, compete with iodine for the same cell receptors, which can result in many of us having low iodine.

And since one of the primary functions of iodine in your body is the formation of thyroid hormones, low iodine can be serious. Iodine also plays a role in the health of your heart, brain, female hormones, breast health, immune system and so much more.

One of my favorite books on the subject of breast health is *Breast Cancer and Iodine: How to Prevent and How to Survive Breast Cancer* by David Derry, MD.

In most cases, your greatest intake of dietary iodine comes from refined table salt. In your diet, iodine can be quite variable depending on the amount of iodized in the food product, or the feed of the animal eaten. With the growing interest by patients in sea salt, which is usually not iodized, the levels of dietary iodine decrease even more.

### **• Testing your levels**

It's very important to find out if you need iodine or not. Considered the most accurate assessment of your iodine levels is the "iodine loading test". You swallow a total of 50 mg of Iodoral

tablets. Then in the next 24 hours, you collect your urine to be sent in for analysis. Iodine labs include: Hakala Research Labs at [www.hakalalabs.com](http://www.hakalalabs.com), FFP Laboratories (E-mail: [ffp\\_lab@yahoo.com](mailto:ffp_lab@yahoo.com)), Doctors Data, Inc at [www.doctorsdata.com](http://www.doctorsdata.com), plus Latrix Clinical Services (e-mail: [info@labrix.com](mailto:info@labrix.com))

### • Supplementing with iodine

Iodine supplementation has grown in popularity, especially with thyroid patients when they find themselves low after testing. Stephanie A. Buist, a Naturopathic practitioner who feels her use of iodine helps her immune system after once having thyroid cancer, states:

*Hypothyroidism is growing at an alarming rate, and I believe one of the key components is iodine deficiency. Until the 1980's, potassium iodate was used as a dough conditioner in bakery products. But for some reason, it was removed and replaced with potassium bromate, a halide that inhibits thyroid function. Halides such as fluoride, chloride, bromide and mercury will block the absorption of iodine so enough iodine (higher than the RDA) must be ingested to overcome these common environmental factors. Supplementation of 6 - 50 mg of Lugol's Iodine will generally be sufficient to improve thyroid conditions. To increase the effectiveness of iodine in the treatment of thyroid conditions, Selenium, Vitamin C, Vitamin B2 (Riboflavin) and Vitamin B3 (Inositol Hexanicotinate) should also be considered.*

The most popular supplements are Iodoral in pill form, 12.5 mgs & 50 mgs, or Lugols, 2% or 5% as a liquid added to your favorite juice. One drop of 5% Lugols has approximately 6.25 mg of iodine (plus 3-4 mg potassium). Recommended doses to increase low levels are up to 50 mg, though others take less. Iodine supplementation should be taken with food for better absorption and less problems of the stomach. Most avoid taking it after the afternoon, since iodine intake in the evenings can keep you awake.

- **Side effects with iodine**

If the iodine loading test reveals you are low, you'll need to know that the use of iodine acts as a detoxing agent, especially against excess bromide and other toxins, so be prepared for potential side effects like fatigue, pimples, headaches, etc. They will eventually go away, and it helps to take supporting nutrients to counter those side effects, which includes Vitamin C, B-vitamins, Vitamin D, and minerals like selenium, magnesium and zinc. You can also take smaller amounts of iodine and only slowly build up, if needed. Stephanie Buist, ND, on her website *Natural Thyroid Choices*, also recommends Salt Loading, for three days maximum, which binds with the bromide and takes it out through your urine. Mix ½ tsp Celtic Sea Salt in ½ cup warm water, drink, then a 12 oz. glass of water, and repeat all of it every half hour until you urinate.<sup>23</sup>

It's also helpful to keep all of your detox pathways open. Many teas can help do that, like dandelion, lemon and ginger, nettle and chamomile. The herb milk thistle seeds is known to help with your liver and detoxing.

- **Iodine and Hashimotos**

Some Hashimotos patients find iodine to exacerbate their autoimmune symptoms and make them feel far worse. Others have found it to lower their antibodies. Naturopath Stephanie Buist, owner of the Iodine group on Yahoo, states you may be able to avoid the exacerbation with the proper supporting nutrients, which includes Vitamin C, selenium, sea salt and ATP CoFactors, plus detoxing teas. She also mentions salt loading, which moves toxins out through the kidneys faster. Additionally, says Buist, some mistake the symptoms of toxin release for an exacerbation of the autoimmune attack. All of the above is here: <http://naturalthyroidchoices.com/SaltAdrenal.html> If you have Hashimotos, you will want to do research on the use of iodine before proceeding, or talk to a knowledgeable doctor.

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<sup>23</sup> <http://www.naturalthyroidchoices.com/SaltAdrenal.html>.

## • Iodine and adrenal dysfunction

Some patients have wondered if their iodine supplementation further stressed their adrenals. Other the other side of the coin, there are others with adrenal fatigue who found the toxin release not being a problem if they were taking certain supporting nutrients along with the iodine.

Victoria, an adrenal dysfunction patient, relates the following example of how those nutrients made a difference:

*I was treated for adrenal exhaustion by an Integrative Medicine MD, without iodine, for most of a year (she said my saliva test was the worst she'd ever seen). Nothing she did healed my situation, including adding 3mg of iodine/day-- just minimal change. I then lost my insurance and couldn't consult with her anymore. After a crash in my health, I found the Iodine list on Yahoo (see list of groups in the References towards the end of this book) and learned about the whole protocol: higher amounts of iodine and most importantly, with companion nutrients plus additional supplements for healing adrenals. I took extra unrefined salt (1+ tablespoon per day), extra Vit C, Vit E (1200iu/day), started Vit D3 every day (8000iu), plus Isocort (1-2 pellets per day) and pregnenolone (40-50 mg/day). After 2-3 months of this, I had to stop the Isocort (adrenal cortex) because when I would take it, I would become over-adrenalated.*

*Since then, I can do my work for hours at a time and not crash constantly. I have energy to spare and have been doing music and performance with my partner and more. Can go out and dance for hours. And also since then, have lost at least 20 pounds and not regaining.*

Jody has found the use of iodine to be huge in confronting her Hashimotos:

*I heard about the use of iodine but was afraid of it, since I read of problems if you use it with Hashimotos. But I also tested low when I did the iodine loading test, so I decided to give it a try. I made sure I took plenty of selenium and minerals with salt water. I started low and built up. After two months, I noticed*

*that my heart palps had ceased. Four months after I started, my doctor agreed to test my antibodies. Both were lower! I was shocked. And they have continued to fall. I also lost all sign of my fibrocystic breast disease.*

This is going to be an individual call. Some avoid iodine altogether with adrenal dysfunction so as not to make it worse: others take a much lower dose than 50 mg, such as 12.5, and do well. Others, like Victoria, find success with iodine and adrenal fatigue if they are taking supporting nutrients and detox teas or herbs.

Because iodine use can be a controversial subject with adrenal dysfunction, I encourage you to join the yahoo Iodine group and seek opinions before deciding what is best for you. An excellent book on the subject is *Iodine: Why You Need It, Why You Can't Live Without It* (3rd Edition) by David Brownstein, MD. and can be ordered directly from his website.

## **Hypopituitary**

Though this condition is considered rare, thyroid patients have noticed that it may be more common than was thought because of a dysfunctional hypothalamus/pituitary axis. Hypopituitarism is a low-functioning pituitary gland, a small pea-sized gland at the base of your brain.

When healthy, your pituitary secretes hormones which direct the functioning of your adrenals, thyroid and sex hormones. For the thyroid, that hormone is the TSH (thyroid stimulating hormone), and for the adrenals, it's the ACTH. A good clue of hypopituitary, along with symptoms of fatigue, feeling cold, depression, low blood pressure, etc. is having a very low TSH lab result, such as lower than 0.8 for women, and 1.8 for men, *along with a low free T3*. Symptoms are similar to well-known hypothyroid symptoms. You can also have a low ACTH (Adrenocorticotrophic hormone), low LH (Luteinizing hormone) and low FSH (follicle-stimulating hormone). A low ACTH is discovered via an ACTH Stim test.

Another cause of hypopituitary is that nasty head injury when you ran into a wall with your bicycle. Even whiplash from someone hitting your car from behind can damage the pituitary.



A tumor on the pituitary can slow its function, as can blood loss, radiation, toxins, or antibodies.

Treatment for hypopituitary is the same as treatment for one's hypothyroidism or low cortisol, as well as sex hormone treatment. Is it cureable? Many will say no. Yet, we have seen one patient rid himself of his hypopituitary with the correct thyroid and adrenals treatment.

## Thyroid Cancer (Thyca)

There's nothing more shocking to find out you have thyroid cancer. Many patients diagnosed with thyroid cancer weren't even aware it existed, and definitely didn't expect it in themselves. And women are three times more likely to develop it than men.

In the early stages, there can be no symptoms of thyroid cancer. Later, it's usually discovered when a nodule is found on the thyroid by touch, viewed with an ultrasound, and cancer confirmed after doing a fine needle biopsy. (Luckily, medical articles state that only 1-5% of those nodules are cancerous, i.e. just because you find a nodule doesn't mean you have cancer.) Other symptoms of cancer in the thyroid can include cough or hoarseness, swelling of your neck or difficulty swallowing, but these can also be from Hashimotos disease.

What causes it? There appears to be multiple higher-risk possibilities. Excess radiation exposure is one known risk, such as from repeated x-ray treatments for acne, dental x-rays, etc. Radioactive fallout is another risk, such as the Chernobyl accident in 1986, or the nuclear reactor meltdown in Japan in 2011. Genetics can increase your risk due to an altered gene. Low iodine raises the risk of thyroid cancer. Some patients who find themselves with thyroid cancer have none of the above risks.

A lab test to help confirm cancer, especially papillary and follicular (see below), is called Tg, or Thyroglobulin, which might be made by thyroid cancer cells. Note: if you test positive for antibodies against thyroglobulin (which are antibodies used to diagnose Hashimoto's disease), your Tg will not be a reliable tumor marker for thyroid cancer, says research.

There are four basic forms of thyroid cancer: Papillary (*which are the majority of cases, related to radiation exposure, highly*

*curable*). Follicular (*more aggressive, seen in iodine deficiency*), Medullary (*in the parafollicular cells which make calcitonin*), and Anaplastic (*least common, very malignant*).

Most cancers of the thyroid are treated via removal of the lobe which contained the cancer, and often the other side in many cases. Radioactive iodine (RAI) is a conventional, even if controversial, follow-up treatment, since thyroid cells continue to absorb iodine, and the excess iodine becomes a form of chemotherapy. Alternative practitioners can use holistic treatments to ease side effects caused by needed conventional treatments of thyroid cancer. The latter would be important to talk about with a good doctor.

Non-profit group for thyroid cancer survivors: [thyca.org](http://thyca.org).

## **RAI (radioactive iodine) as a treatment for Graves hyperthyroid**

Radioactive iodine ablation (RAI), or I-131 taken orally, is a common treatment of Graves hyperthyroidism which has been used for many decades. Since iodine is used by the thyroid, the gland will collect radioactive iodine without knowing that it's radioactive. In turn, the thyroid becomes destroyed and the excess is secreted into your urine. Elaine Moore, an outstanding hyperthyroid patient advocate, observantly states that the thyroid gland then becomes the victim of the treatment, whereas the cause was an immune system gone awry<sup>24</sup>.

Unfortunately, using RAI to treat hyperthyroid (and in some highly unfortunate cases, Hashimotos) will result in hypothyroid for most. But worse, there are potential long-term side-effects, and the reason you will see a strong movement by thyroid patients away from RAI. The following website lists 22 top reasons not to have RAI: <http://atomicwomen.org/Top20Reasons.htm> which includes an increased risk for certain cancers, damaging the parathyroid, eye disease risk and other ongoing problems. Or, you can read a counter to these objections in the *Journal of Nuclear Medicine Technology* Volume 34, Number 3, 2006 143-150 and you be the judge. Patients continue to dislike it.

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<sup>24</sup> [www.elaine-moore.com/gravesdisease/RAI.htm](http://www.elaine-moore.com/gravesdisease/RAI.htm)

Alternatives to RAI include antithyroid drugs which act chemically on the thyroid gland. Propylthiouracil and methimazole (brand name Tapazole) are mostly used in the United States and Canada, whereas carbimazole is used in the UK.

***Odds and Ends Tidbits:***

- \* If inflammation is driving your ferritin up, up to 1000-2000 mg of Krill Oil has been shown to lower inflammation, which in turn can lower your high ferritin.*
- \* Iodine proponents underscore the use of iodine supplementation to prevent thyroid cancer from radiation in the environment.*
- \* Working on everything and still seem to have problems? Time to ask your doctor about testing your EBV (Epstein Barr Virus) levels, other viruses and bacteria, plus Lyme disease.*

# CHAPTER 14

## *Patients have a story to tell*

Even with all the ground-breaking information in this book, the most inspiring part can be the stories of others who have lived it. Here are a few to inspire you, and there are millions more across the world. Note that some of these stories refer to the pre-formulated Armour desiccated thyroid, which patients since found needed to be chewed up. There are many other good desiccated thyroid brands.

### **Meleese Pollock's story:**

My story starts in 1994, when I not only started to feel fatigued, but also my mind, numbingly so. I had gained 23 kilos and I had never had a weight problem in my life.

And the fatigue!!! I would go to bed at night and *die* with 10 - 11 hours of sleep as if I'd been doped up. Then I would drag myself out of bed and stand in the kitchen and cry because I was too tired to get the children out of bed and ready for school.

I had my three children when I was 28, 35 and 38 years old. I finally went to the doctor who thank goodness tested my thyroid function, I had the answer! I was diagnosed with Hashi's/hypo- and prescribed Oroxine (the Australian brand for synthetic T4) 100 mcgs. After 3 months I was re-tested and it was increased to 150 mcgs. Over the next couple of years, I had 2 further increases—

first to 200 mcgs, then 300 mcgs—the latter where I stayed for the next 10 years. And yet, I still had crippling fatigue. I couldn't lose the weight and had major depression.

I got on the Internet, started searching for answers and learned about Armour. I had first heard about it from a naturopath who had called it “pig thyroid”. I found that here in Australia, I could get compounded capsules made up with imported thyroid USP. The compounding chemist said that I need 180 mg (3 grains) as that was equivalent to 300 mcgs Oroxine.

So I started the compounded natural thyroid and within a few days felt better. I had blood tests done at around 3 months and was horrified to find that my TSH had shot up to over 6.00.

So I went back on Oroxine. I simply thought Armour wasn't working for me, was doing something wrong and it was my fault. Things continued to go downhill for me. I decided I was going to end my life if things hadn't improved. And all of this occurred while having a TSH of 0.05, a Free T3 of 5.2 with 5.3 at the upper end of the range, and a Free T4 of 19 with an upper range of 23. Perfect labs and still all the symptoms!

About 18 months ago, I decided to give the desiccated thyroid one more shot after I found out that you dose by symptoms and not to a “conversion formula”. I have slowly worked my way up to what seems to be my optimal dose of 390 mg (6 and ½ grains) I cannot believe the difference! My energy levels are so much better, the brain fog/depression is going and... drum roll... I have lost 23 kilos! (about 50 pounds). Armour has saved my life.

### **Nancy Kay Adam's story:**

It almost brings me to tears to write my story, but I want to contribute. I have been a runner since high school. I competed in many meets and won a lot of them. I was also good at tennis.

In college, I continued with it and also had many accomplishments. I've got a lot of ribbons and trophies in my display cabinet which I'm proud of.

When I got out of college, I got married to my sweetheart, and we immediately had Michael. And I think that's where this all began. I just didn't feel right after he was born, and I could not

lose that extra poundage. 15 months later, I had Emily. And it was even worse this time. I was really tired, and had post-partum depression. And I was getting very pudgy, which bothered me greatly.

I thought I could work it off by running again, which I tried. The high school nearby had a great track I could use. But I was wrong. Each time I went, I was become more tired than ever. I just crossed it all off to being a young mother.

Fast forward 5 more years, and I had gained even more weight! I couldn't run, and my doctor kept telling me my problem was eating too much and exercising too little, since everything he tested came back normal! I was also now on an anti-depressant. But I'll tell you, I was still really depressed.

And I was also starting to feel a lot of anxiety. Sure, I loved my kids and being their mom, and we were in a gorgeous house thanks to my husband's new job. But I looked horrible and felt as bad. Those were bad years in spite of all the good.

Finally, I met Janie while sitting beside each other at an outdoor violin concert. And as we got to know each other better, she gave me some information that I found quite curious. I did the reading that she told me to do, and made an appointment with a doctor about 2 hours away that she recommended.

To make a long story short, I found out I was hypothyroid all this time, that the TSH wasn't telling it at all, and that I had the beginning of adrenal fatigue. I started on Isocort, and later switched to HC. I needed to be on desiccated thyroid, which I did with this new doctor after she helped me raise the HC. I had few bumps—had to tell her that I wanted to keep raising from where she thought I should stay. And now, I feel 100% better. 100% percent. I'm already weaned down my HC, and I've started running again, too. This is wonderful.

### **Helen Trimble's story:**

After months of a rapid decline in my health, accompanied by an endless list of terrifying symptoms, the diagnosis of Hypothyroidism and ensuing prescription of Synthroid gave me immediate psychological relief. I felt positive Synthroid would

end the troublesome loss of muscle, hair and eyebrows, dry scaly skin, hoarse throat, debilitating fatigue, shortness of breath, restless legs, and incessant tingling of extremities.

It did not. I continued to regress further into a deep, dark funk and was severely depressed. I lost the ability to think clearly; needed a cane to walk; suffered from sleepless, unbearable pain-filled nights, experienced incessant loss of breath, nighttime seizures; horrific heart palpitations and continued loss of hair. Synthroid was sending me to my grave. I was literally dying and contemplated suicide. My physical and mental deterioration were just too great to bear. I was no longer terrified of death; I was now afraid of living. I realized that I was no longer good for anyone and was soon going to be another poorly treated thyroid statistic.

According to my doctor, the labs were normal. "Normal," I asked? "How can you sit there and tell me I am normal when I look and walk like this?"

She had no reply. She just shrugged her shoulders. I told my doctor that I wanted to try desiccated thyroid. She protested, but finally agreed. I was in such bad shape that a new prescription was worth a try.

Within two weeks, my deteriorating mind, body and spirit was rapidly changing for the better, and into week four, I was able to walk without the aid of a cane and the muscle pain and cramping was gone. I began to sleep soundly, the shortness of breath and heart palpitations stopped, and I developed wonderful tufts of new hair growth on my scalp along with the reappearance of long lost eyebrows. Throughout the day, I had renewed energy and the brain fog was a thing of the past. Further blood test showed I was anemic, and I started ferritin supplementation and supplementation and B12 shots. In a few months, the fatigue disappeared.

Switching from Synthroid to Armour saved me from suicide and a life of disability. Armour stopped the thyroid madness I was experiencing and brought balance back to my life. Today, I am working full time, completing my Master's degree from the University of Phoenix, and living life to the fullest.

**Kerry Bergus' story:**

About the time I started in to puberty, my mother, who was an RN, began to think I had hypothyroid problems, in spite of always having "normal" results when an endocrinologist would check my thyroid levels. My periods were so heavy and painful that I had to stay home from school a few days each month and live on codeine.

I was finally put on birth control pills. My breasts grew huge, from a B cup to a D cup almost overnight. My periods were no longer painful or heavy, but I began to have great anxiety with no reason. I gained some weight in spite of being active with drum corps and other activities. After high school, I went off the birth control pills and began to have horrible sebaceous acne. I also put on weight and the painful heavy periods returned.

In my late teens and into my twentieth year, chronic tonsillitis and sinus infections resulted in the removal of my tonsils when I was 21. I was depressed and considered suicide seriously once. Thankfully my mother saved me from myself. From that point on, I struggled with major anxiety and bouts of depression with thoughts of suicide from time to time. In my late twenties I married and began my journey in to motherhood. After my first child was born I lost the baby weight within six weeks and was happily in my pre-pregnancy jeans. Within six months I was pregnant again, but this time, the weight didn't come off after the second birth. My muscle tone deteriorated, my hair fell out and I felt tired most of the time. My dry and flaky skin resembled a snake and the anxiety increased.

When we wanted a third child a couple of years later, we struggled with fertility. When I finally got pregnant, it was difficult. My weight climbed, though my eating didn't change. I was very sick with diarrhea throughout, my hair fell out and I ended up with high blood pressure. Post delivery, my weight didn't drop despite eating less, my hair continued to fall out and my blood pressure stayed high. I ended up having an endometrial ablation to stop the hemorrhage type bleeding with each period.

As the years went by, my weight climbed, hair stayed thin and my marriage deteriorated. When I became a single mom,



I was diagnosed with low thyroid and my OB-Gyn put me on Synthroid. I noticed no difference in the way I felt, even with increases. He would check my TSH, and then declare I was fine. An endocrinologist then declared that I had Hashimoto's autoimmune thyroiditis. By this time my cholesterol was 217 and I felt lousy.

I knew that I needed something more and so began searching the internet, where I found a natural thyroid hormone group. I finally found a group that knew exactly what I was going through. The women were so supportive and insightful that it was like receiving a cup of cold water on a hot day. I finally went to my doctor and asked her to change me from Synthroid to Armour Thyroid. She had never heard of Armour, but agreed to write me a prescription.

As I made my way up to 3 grains, we saw dramatic changes in my cholesterol, down from 217 to 139. My skin became so soft and supple that I hardly ever use lotion anymore. No more acne breakouts and a reduction in blood pressure medication. All of this was due to my change from Synthroid to Armour. My life has improved so much and my energy has returned. The anxiety that I lived with for over thirty years has completely resolved. I thought I would have to live with it forever and Armour has given me my life back.

### **T.F.'s story:**

For years, my wife told me I'm a typical man, because I refused to go to the doctor. But when my problems finally added up and even affected my work (I own a golfing store), I went. I was finally tired of being tired and out of breath. And my wife wasn't too turned on by my girth. Turns out that I had a bad back (which I obviously knew), and I'm hypo-. So the doc put me on Levoxyl. I think it kinda helped, but it didn't either. I was still tired and my back hurt.

About two years later, my wife, who is an internet buff, told me about Armour. I said okay and talked to my doc. He's actually my neighbor and my wife had to prod him. But I finally got switched. It definitely has made a difference. I've also found out

that my iron levels weren't too swift, so am working on that, too. I'm impressed. You don't hear about men much with hypothyroid, but I did, and I've met a few others now who have it. Armour has really worked. My back has even improved because I can use our treadmill in the basement now.

### **Cathy's story:**

We had severe and ongoing stress starting in 1985 with the death of my father and the theft of my husband's machines and tools for his livelihood. It continued with his also getting a severe hernia and having surgery. Continuing on, we had problems with our oldest two children, affecting our youngest child in a negative way. Then our house burned down and we found we were \$100,000 under-insured. Our stress levels soared as the problems with the neighborhood druggies more and more affected our older two children. This went on for a number of years until they left home.

My Chiro told me I was adrenally-challenged in the early part of this century, around 2000 - 2001, but I didn't have a clue as to what that meant so I pretty much ignored what he said. But I was steadily getting sicker and more hypo- and the docs would only give me Synthroid. I did some online research and discovered Armour, but couldn't find a doc to prescribe it. I was ill and desperate in 2005 - 2006 and found the Yahoo thyroid groups and finally found support. I initially started Armour and then read that adrenal problems can compound hypo- problems, so discontinued Armour and got some Isocort with my Chiro's blessing. I also started Iodoral (iodine) around then also, figuring that with my long history from childhood of hypo- symptoms that were undiagnosed that I was most probably also iodine deficient.

After I worked my way up to 3 - 4 or so Isocort per day, I added the Armour back in and gradually increased the Isocort up to 8 - 10 per day, and also increasing the Armour in conjunction with the Isocort until I was at 6.75 grains. I should mention that once I got to 8 - 10 Isocort per day, I switched to HC at around 25 mg daily.

I did better than I did on synthcrap, but something was still missing, so I investigated Reverse T3 and figured that with all the

severe stress, and I do mean severe and ongoing, that RT3 was probably an issue. I did not have money for independent testing, so I put myself on a temporary trial of T3, which I am still on, trying to clear the receptors. Once I run out of T3, I will have been on it for approximately 3 - 4 months or so, at which time I will be switching back to Armour by swapping it out, and may keep a little T3 in the mix, depending on how things go. During this whole time my need for HC stayed steady for several months.

Gradually it seemed the amount of HC I was taking was too much as I would feel some hyper symptoms, so I reduced the dosage to 22.5 and held steady for several months. Once again it seemed like too much, so I pared it down to 17.5 mg daily and was there for a few months. During this time of reducing the dosage I was forgetting doses here and there, with no ill effects, which told me my need for HC was reduced. I gradually bronchitis 2 - 3 times because I felt shaky, but that is all, and I haven't stress dosed now for several days and am fine, so I conclude my need for HC on a daily and regular basis is now reduced until I was at 10 mg daily, then 5 mg and then none. I have stress dosed for the asthma attacks and resulting past. I am vigilant, however, and will stress dose if I need to as I fully realize my adrenal state is most probably still somewhat fragile; the shakiness during the illness told me that, and as I still have a good supply of HC I will follow my symptoms like I have and stress dose when needed; I do NOT want to go the way of AF ever again if I can help it.

# CHAPTER 15

## *Good Food, Good Supplements*

Informed and better-treated thyroid and adrenal patients love eating healthier foods and taking certain supplements on their road to better health. And for good reason. Many of us discovered that we have been low in so many important nutrients—minerals like potassium, sodium, magnesium, selenium and/or iron, plus vitamins like D, B12 and more. Both poor diets and poor digestion due to hypothyroidism have played roles. And we have needed help in several areas.

So we have turned to good food and good supplements. Foods, especially when raw and uncooked, are nutritionally dense and provide important enzymes needed for digestion and optimal health. Organic foods are said to provide less pesticides and other toxins.

Some patients choose to go without meats; others find meat important to their good food consumption.

Outside of good quality foods, we have also turned to supplements. Some brands of supplements may be better quality than others. For example, we have read that food-based vitamins may have higher processing standards. On the other hand, some state that synthetic vitamins are really the same as natural, molecule to molecule. Additionally, some brands may make better digestible products than others based on the fillers. I, for example, like buffered Vitamin C, so I choose powdered Vit.

C that also contains magnesium, calcium and potassium and simply mix it into my morning drink. i.e. no fillers.

Good consumer organizations have warned about buying the super-cheap off-brands which, when tested, had less of at least one nutrient than stated. Bottom line, it will be the responsibility of each individual to research and decide what they are most comfortable with.

This chapter is divided into two groups: good foods that patients report eating, and good supplements that patients report taking, whether finding their levels of certain substances were low and needed a boost, or simply to support their bodies in good health. Note that this list is not exhaustive--just representative of several foods and supplements that thyroid patients report eating or taking. Some patients take some of these; other patients take different ones. It's individual. This is not to say that anyone reading this should be taking any of these. But many patients felt the need for some of these after seeing the results of lab testing. Others wanted to take some of these just to be healthier. A knowledgeable doctor, naturopath or nutrition specialist can help you with these, as well as inform you of any side-effects.

What about gluten in foods? Many patients have discovered they have to avoid gluten to achieve better health. Some even report reversing their hypothyroid state (especially with Hashimotos) if they were strict in avoiding gluten.

## **FOODS:**

**Almonds:** These nuts are high in protein as well as magnesium, potassium, Vitamins E and B2.

**Almond Flour:** This is a healthy alternative to wheat flour and is gluten-free, high in fiber and protein, and low in digestible carbs. There are many good recipes on the net. (Pancakes: cup of almond flour, two eggs, ¼ cup sparkling water, 2 tablespoons coconut oil, ¼ tsp salt, and touch of sweetener)

**Apple Cider Vinegar:** Who would have guessed, but when this age old remedy is added to our favorite juice or water (one tablespoon), it greatly improves digestion (a common issue with thyroid patients) and can even remove lactose

intolerance. To see even more benefits, check out this website:  
<http://www.earthclinic.com/Remedies/acvinegar.html>.

**Apricots:** Even dried, these are a great source of potassium, which can go low in thyroid or adrenal patients, and two apricots are roughly equivalent to one 99 mg potassium pill.

**Asparagus:** Lo and behold, turns out this veggie may have some cancer-fighting properties with its histones and glutathione. It's also a good source of B6 plus has magnesium and many more nutrients. I prefer it steamed at the most, or raw. Asparagus shoots need to be young for best taste.

**Avocados:** Called the perfect food all in one, avocados are a good source of Potassium, Vit. A and C and contain the healthy monounsaturated fat.

**Blueberries:** A top-notch low-glycemic fruit, blueberries can reduce inflammation that is common in hypothyroidism and adrenal issues, as well as lower certain cancer risks. Research reveals that they improve memory, can reduce blood sugar, and elevate mood. They are rich in vitamin C as well as antioxidant phytonutrients called anthocyanidins, which enhance the Vit. C effects. Potentially great for one's adrenals and thyroid.

**Brazil Nuts:** Turns out these nuts are a good natural source of selenium, and many articles suggest to consume no more than two a day to meet your selenium needs.

**Cauliflower:** When grated, this veggie makes a great very low carb pizza crust, believe it or not. (1 cup cooked, riced cauliflower, an egg, cup grated mozzarella cheese, 1/2 tsp fennel and 1 tsp oregano. Combine, press into crust size on pan. Bake 450 for 20 or so minutes. Add pizza or alfredo sauce. Meats and veggies of your choice. Broil more mozzarella on top.) Is a goitrogen, so don't eat often.

**Coconut Oil:** Turns out there are a lot of health benefits from this milky-white, shortening-looking oil. Scientific research shows it to help with digestion, weight, diabetes, energy, Alzheimers and so much more. I take 2 tablespoons daily.

**Coconut water (not coconut milk):** Turns out this nutritious drink is pretty high in potassium and minerals—even higher than a banana. It does have natural sugar. Highly recommended by many.

**Donuts:** Just kidding. Don't we wish.

**Eggs:** Like other proteins, eggs are a good source of B-vitamins, especially riboflavin (B2), and the yolk is rich in Vitamin A, plus D. Powdered egg whites make good high-protein drinks, and some are flavored. Great food if you are insulin resistant.

**Fish, poultry, meats:** These are all good sources of protein and b-vitamins, with chicken and turkey coming in slightly higher in protein. And increasing your amount of daily protein while lowering your carb intake helps with weight loss or maintenance—a boon for thyroid patients.

**Onions:** The antioxidant onion is rich in good nutrients, including Vit C, potassium, copper, manganese and Vit. B6. They may help bring high blood pressure down a bit due to the sulphurs they contain, say some patients.

**Pumpkin Seeds:** For those who find their magnesium levels too low, pumpkin seeds are a good food source of magnesium as well as protein and zinc. Most all seeds are good for us!

**Spinach:** This is one great veggie, and it's a good source of zinc, niacin and Vit. A, C, E, and K, plus iron, magnesium, potassium... and more. Add spinach in a blender with your favorite low glycemic berries, cottage cheese, vanilla, stevia, water, etc and enjoy as a healthy blended drink.

**Tomatoes:** This 'fruit' used as a veggie is full of the antibiotic lycopene and contains Vit. A, C, K, Potassium and iron. Sprinkle parmesan cheese on top and broil for a great treat.

**Vegetable drinks from the blender:** For those who don't like their veggies, placing them in the blender with an apple and its high Vit. C is a great way to promote continued good adrenal and thyroid health. Great mixtures come from spinach leaves or collard greens, celery, carrots, cucumbers, asparagus etc. You may have to increase thyroid meds a bit if you do this regularly to counter the goitrogenic effect of some of these veggies.

**Yogurt:** A good natural way to introduce acidophilus into your digestion and body. Check the labels to make sure it's loaded with good bacteria. Greek Yogurt can have the lowest carbs.

## **SUPPLEMENTS:**

**Acidophilus:** Not only does this help with digestion, this is an excellent supplement for vaginal health, putting good bacteria back in, and protecting against bad bacteria and parasites. It also seems to boost immune system health. If patients are using compounded desiccated thyroid, they ask for powdered acidophilus as the filler rather than cellulose.

**ALA (Alpha Lipoic Acid):** This is a fatty acid and antioxidant that helps convert your blood sugar into energy, so diabetics love it. It also helps with peripheral neuropathy. An added benefit is that it appears to inhibit tumor growth. ALA in higher amounts may inhibit conversion of T4 to T3.

**Ashwagandha:** This adaptogen herb seems to counter stress and anxiety as well as supports the immune system against cancer and disease. It's used to support already healthy adrenals, not to replace cortisol for sluggish adrenals.

**B-vitamins:** It's stated that your need for the energy-giving, water-soluble B-vitamins increases as you get healthier on desiccated thyroid, so many thyroid patients look for high-dose B-vitamins. They support your higher metabolism, skin tone, immune system, improve your emotional health and are huge for the health of your adrenals.

**B5 (Pantothenic Acid):** This is called the anti-stress B-vitamin and along with Vitamin C, has a strong relationship with the adrenal cortex function, which is why you'll often hear it recommended by informed doctors when you are under stress.

**B6:** This is one of the longest studied B-vitamins and can go low with thyroid problems. It's needed for your serotonin levels, as well as helps with your immune system and red cell formation.



**B12:** It is all too common for thyroid patients to go low in this important B-vitamin after just a few years of being untreated or undertreated, which can contribute to high RT3 production. Without enough B12, you can suffer from dementia, irritability or depression, or tingling and/ or numbness of your fingers and toes, problems in your walking gait, or eyesight problems... plus more.

**Cinnamon:** This spice now comes in capsule form, because thyroid patients who have diabetes discovered that cinnamon can lower blood glucose levels. It's not dramatic—20-30% according to clinical studies, but worth the improvement. Suggested amounts are 1 – 4 grams (the latter equals ½ teaspoon). Going much higher isn't good for our livers, say some researchers.

**Coenzyme Q10:** This is found naturally in your mitochondria cells but can go low with long-term untreated or undertreated hypo-. It helps with heart function and other muscles and is a good antioxidant.

**Cod Liver Oil:** This superfood nutritional supplement is great for heart function. It has high levels of Omega 3, is high in Vitamins A and D, and for some, eases arthritic pain. The high levels of D are important since so many thyroid patients go low in D.

**Eleuthero (Siberian Ginseng):** This is an herbal adaptogen that helps deal with stress and may help prevent the dive into adrenal dysfunction, which will require cortisol. It helps boost concentration and immune function, as well.

**Fish Oil:** Luckily, fish oil is now made with flavorings like lemon and cherry which make it more consumable. And the latter is important since fish oil is high in the beneficial Omega 3's. It seems to have good effect against depression.

**Folic Acid:** Many times, this is found in your multi-mineral—it's also called B9. Studies show it to be helpful in getting pregnant, and help prevents low red blood cell count and supports heart and brain function. Some say you simply want a mid-range RBC folic acid lab result, because neither too little or too much is good for you.

**Ginger:** When I used to be on the lousy T4-only, I had bad tendonitis. Taking herbal ginger powder in capsules took that away, just as desiccated thyroid did the same. But I still take ginger to this day, as it has so many beneficial properties which range from reducing arthritic pain, to healthy heart function and lowering cholesterol, as well as the prevention or management of diabetes.

**Ginkgo Bilboa:** This is a big-selling herb which helps with dementia, brain cognition and memory—all which those still on T4-only or with adrenal fatigue may have to deal with. The one side effect of concern is bleeding in some, so that has to be watched.

**Grape Seed Extract:** This is a very safe, effective bioflavonoid anti-oxidant which improves the linings of your arteries, and many doctors prescribe it to clear out fatty vessels. It helps decrease allergic responses, improves blood pressure and heart function. And... tah dahh... it can reduce wrinkles.

**Iodine:** Since we are consuming so many chemicals in our food and water, iodine receptors get clogged or iodine is leached out of our bodies due to toxins like fluoride, bromide and chloride. Thus, many thyroid patients supplement with iodine, either the liquid Lugols or the pill form called Iodoral. See Chapter 13 about iodine.

**Krill Oil:** Turns out this marine oil is rich in EPA, DHA and Omega 3, and it does a good job of lowering inflammation. About 1000-2000 mg does the trick daily. If you are allergic to shellfish, you may need to avoid Krill Oil.

**Magnesium:** Even after being optimal on desiccated thyroid, I was shocked to find this too low, as was my potassium. Magnesium is a very important mineral, and when too low, can cause muscle cramping and heart palpitations. When optimal, it supports your immune system and blood pressure, gives better energy and stronger bones.

**Melatonin:** Those with high nighttime cortisol find the hormone melatonin very important in helping them fall asleep. It's also an anti-oxidant, and can be important against dementia.

**Milk Thistle:** This supplement has helped lower liver enzymes and high RT3. Recommended amounts start at 400 mg and research shows one can safely go up to 1200 mg daily.

**Minerals:** Both in macro and trace, minerals are so important for health and well-being that thyroid patients put a strong emphasis on them. The macro-minerals include calcium, magnesium, potassium, sodium, phosphorus, chloride and sulfur and are needed in larger amounts by the body. Needed in smaller amounts, but still important, are trace minerals iron, iodine, zinc, selenium, manganese, copper and cobalt. Even fluoride is a trace mineral, but we get too much in our water.

**Multi-Vitamins:** There are a variety of multi-vitamin supplements on the market, and patients look for the ones that best fit their needs. Patients often add more vitamins and minerals to their multi-vitamins.

**Potassium:** Like magnesium, many of us find ourselves low in the electrolyte potassium, which can cause salt retention and blood pressure problems. Potassium is important for good heart function, as well as skeletal and smooth muscle contraction, including for digestion. Long-term stress can also lower it. Requesting RBC (red blood cell) rather than serum will reveal cellular levels of potassium. Normal range can be 3.7 to 5.2, and research suggests healthy levels are mid-to-upper range. Since too-high, over-the-range potassium can be dangerous, wise doctors recommend frequent lab testing.

**Powdered Greens:** If you are like me and not big on veggies, this may be a good supplement to consider. There are a variety of brands of powdered greens, and you will need to check the ingredients, as some have soy, which can be a no-no for thyroid patients. Many do not. It can be mixed with your morning liquid of choice, like juice or water with lemon juice. For that extra pizzazz, you can add flavored liquid stevia.

**Rhodiola Rosea (Golden Root):** This plant helps alleviate depression, besides promote better energy and cognition. It's said to help the adrenals spread cortisol better throughout

the day and counter stress. It's meant to support healthy adrenal function in the face of stress, or even out the highs and lows of cortisol.

**Selenium:** This has become a huge supplement for thyroid patients. The mineral selenium is not only potentially anti-cancer, it is part of the enzyme that causes T4 to convert to T3. Selenium is also a chelator of excess mercury, which we get from our fillings. Studies also find that selenium can lower Hashimotos antibodies. The recommended safe maximum intake is 400 mcg.

**Sea Salt:** Salt is crucial for good adrenal function, and sea salt is the sodium of choice thanks to its trace minerals. Most patients will use ¼ to ½ tsp sea salt in a glass of water, especially in the morning and again in the late afternoon, in both stressful situations as well as with confirmed adrenal dysfunction or low aldosterone. Check with your doctor.

**Vit A:** It seems that Vit. A is needed for thyroid hormones to absorb their needed iodine. And with hypothyroidism, your body has a reduced ability to convert beta carotene to Vit. A. So it's crucial for good immune function, besides vision and more. Ask a professional about amounts, since too much Vit. A is not good, either.

**Vit C:** Turns out that many thyroid patients who were on high-dose Vitamin C escaped the fall into adrenal dysfunction after being on T4 or being undiagnosed due to the lousy TSH lab test. The adrenals use more Vitamin C than another part of the body. Vit. C also makes the iron you take more absorbable, besides counters the free radicals caused by the iron. It also plays a role in thyroid hormone formation.

**Vit D:** Like B12 and ferritin/iron, many thyroid patients find themselves with low levels of this important vitamin, and it may explain the bone problems hypothyroid patients find themselves with. Vit. D is also mentioned as improving immune function as well as having a protective role against cancer and heart disease. When deficient as revealed by labs, we are often told to take anywhere from 2000 to 10,000 IU's or more, then retest.

**Zinc:** Besides improving one's immune system, zinc is needed for many enzymes to do their job, says the Linus Pauling Institute. So if labs reveal zinc is low, it can be good to supplement. But if you have low cortisol, zinc may need to be avoided since it has cortisol-lowering results. Long-term zinc supplementation, such 50 mg daily, can lower copper levels.

***Good foods, Good supplements Tidbits:***

- \* *Potassium supplementation has helped many thyroid patients lower high blood pressure, but it's important to monitor your levels, since too-high potassium, i.e over the range, can be dangerous.*
- \* *Research has shown that having low levels of selenium can promote too-high levels of Reverse T3.*
- \* *Zinc is known to lower cortisol, so you may need to avoid it while working on low cortisol.*
- \* *Taking supplemental progesterone? Research shows a strong correlation between progesterone and higher aldosterone levels—good news for those with low aldosterone. But too much can raise cortisol.*
- \* *The supplement GABA has a calming, anti-anxiety effect. Not for long term use.*

# Addendum A

## Ingredients For Desiccated Thyroid Products

The following list of desiccated thyroid brands is in no particular order. The thyroid powder used in these prescription products comes from porcine thyroids which have been frozen, minced, dried and milled into a fine powder. Several batches are probably combined to create a lot of the full strength porcine thyroid powder. Testing is then done to make sure it meets the established specifications. It is obtained from pigs that can be used for food for humans. It meets the USP (United States Pharmacopeia) microbial requirements for the absence of *Salmonella* and *Escherichia coli*. According to older literature, when it's dried, it must have a limit loss of no more than 6% of weight. It also must meet inorganic testing and must yield not less than 90% or more than 110% of the labeled amounts of T4 and T3. The labeled amounts must be within 10% (plus or minus) of 38 mcg T4 and 9 mcg T3 for each grain of the labeled content of thyroid (60 or 65 mg according to the manufactured product). To read more detail, see the *1995 USP 23 NF 18*, pp. 2684-2685 & *1997 USPDI-Volume III-17th Edition*, p. IV/518. There may be newer guidelines.

1. **Armour** is made by Forest Pharmaceuticals<sup>25</sup>. It was reformulated in 2009 with a decrease in sugar (dextrose) and an increase in cellulose.

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<sup>25</sup> [www.armourthyroid.com](http://www.armourthyroid.com)

As a result, numerous patients reported problems with a return of hypo- symptoms. They were also unable to do it sublingually—a preferred method by most. Eventually, we figured out that by chewing it up, it seemed to release the desiccated thyroid from the excess cellulose/harder compaction and worked better to remove hypo- symptoms. It is made in the following strengths: ¼, ½, 1, 2, 3, 4 and 5 grain tablets. The 3 and 5 grain tabs are scored, One grain is 60 mg and contains 38 mcg of T4 and 9 mcg of T3, plus unmeasured amounts of T2, T1 and calcitonin. The latter three are not removed, as rumor occasionally states. Each tablet contains:

- Porcine Thyroid Powder, U.S. Pharmacopeia
- Dextrose, Anhydrous (anhydrous means any water has been removed and makes the tablet more stable)
- Microcrystalline Cellulose, NF
- Sodium Starch Glycolate, NF
- Calcium Stearate NF (stabilizer and lubricant)
- Opadry White (Titanium dioxide used a whitening agent, but also contains trace amounts of PEG [polyethylene glycol], Polysorbate 80, and Hydroxypropyl Methycellulose. See below.) Armour Thyroid does not contain gluten or lactose. But neither do Naturethroid or Westhroid.

2. **Nature-Throid and Westhroid** are distributed by RLC Labs<sup>26</sup>, Inc. (formerly called Western Research Labs). Westhroid used to contain cornstarch as the filler, but is now made with the Microcrystalline Cellulose with identical ingredients as Naturethroid. One grain equals 65 mg Naturethroid is micro-coated, easy to swallow with a reduced odor. Patients are unable to take these brands sublingually. Naturethroid and Westhroid do not contain corn, peanut, rice, gluten, soy, yeast, egg, fish/shellfish, artificial flavors or artificial colors.

Ingredients listed are:

- Colloidal Silicon Dioxide (from mined ore: natural desiccant to protect from moisture and humidity)
- Dicalcium Phosphate (from mined ore, holds tablet together)
- Lactose Monohydrate (traceable amount as part of desiccated thyroid powder USP)
- Magnesium Stearate (from a vegetable source like palm oil; lubricating agent for tablet compress)
- Microcrystalline Cellulose (synthetic fiber base to provide volume & bulk: also binds thyroid hormones, sadly)
- Croscarmellose Sodium (aids in disintegration in stomach and sadly, even more cellulose!)
- Stearic Acid (from vegetable source—typically palm oil; holds ingredients together)
- Opadry II 85F19316 Clear
- Porcine Thyroid Powder, U.S. Pharmacopeia (USP)

Before Naturethroid was reformulated in early 2010, it was stated to contain all the above, but the Opadry was listed as simply Opadry White (Titanium dioxide used as whitening agent, but also contains trace amounts of PEG (polyethylene glycol), Polysorbate 80, and Hydroxypropyl Methycellulose.) It also used to contain:

- Sodium Starch Glycolate (synthetically derived from starch molecule; aids in disintegration in stomach)
- Carnauba Wax (from pores of leaves of Brazilian wax palm tree; provides complete seal of tablet)
- Polyethylene Glycol (PEG) (synthetic; used with Hydroxypropyl Methycellulose for clear coating)

**NOTE:** *As compared to Naturethroid before the change, the typical smell of desiccated thyroid was noted as less intense. The tablets are now stamped with RLC on one side, and N over 1 on the other, whereas before you'd see just NT1 or a*



*reference to the fact that Time Caps Labs (TCL) used to make Naturethroid for RLC Labs. Calcium filler has moved up from 16 mg to 17 mg RLC states the old contained Magnesium, Potassium, and Sodium (each at less than 1 mg), whereas in the new, potassium is now removed. You may need to chew the tablets up to break down the cellulose, which patients state has now become a problem with the newly formulated Naturethroid.*

3. **Thyroid-S** is from Sriprasit Pharma Co., Ltd. in Thailand (sister company of Sriprasit Dispensary R.O.P.) Advertising states that Sriprasit Pharma is a leading importer of pharmaceutical products, and has been a GMP and ISO 9002-certified manufacturer of pharmaceutical products.

Patients report they are quite pleased with this product. The ingredients, according to Pongsak Songpaisan of Sriprasit are:

- Thyroid extract USP
- Lactose (a milk sugar)
- PVP K90 (Polyvinylpyrrolidone; water soluble coating; no known hazard)
- Avicel (microcrystalline cellulose; holds product together)
- Aerosil (silicic acid powder; help disperse the ingredients)
- Sodium starch glycolate (helps dissolve/disintegrate the pill)
- Magnesium stearate (filling agent)
- Eudragit (a common sustain released coating)
- Methocel (a water soluble cellulose ether-helps bind pill)
- Talcum (a filler)
- Ponceau 4R lake (red additive-aluminum)
- Tartrazine lake (yellow additive-aluminum)
- Brilliant blue FCF lake (blue additive-aluminum)

- Sunset yellow FCF (yellow additive)
- Titanium dioxide (white)
- PEG 6000 (water soluble polymer; binder)
- Dimethicone solution

On 8-09, a US Doctor received the following list after emailing Sriprasit:

Fillers used: Corn starch, actose, Avicel (microcrystalline cellulose: MCC) Binders used: PVP K-90 (Polyvinylpyrrolidone) Preservatives used: Methyl paraben, Propyl paraben Content in one tablet (60 mg thyroid extract): approximately 38 mcg Levothyroxine (T4) and 9 mcg Liothyronine (T3) Source of extract: Porcine.

Patient states: The Thyroid-S tablets are brown with a hard coating, they do not dissolve well as is, but can be chewed. They have a papaya like taste similar to “Thiroyd” below.

4. **Thiroyd** (yes, that’s how they spell it) by Greater Pharma Ltd., a leading Thai Pharmaceutical Manufacturer. An email to a patient by Greater Pharma states that “thiroyd” at one grain contains T3 at 8.31 microgram; T4 at 35 milligram, which is 0.013% and 0.058% respectively. A thyroid patient states: The Thiroyd tablets are white and have a sweet taste almost like papaya or a similar fruit. They dissolve very well sublingually and seem to have a very good potency. Entire paper insert with info is written in English: Greater Pharma Manufacturing Co. Ltd 55/2 Phutthamonthon, Nakhon, Pathom. Like Thyroid-S, this is ordered over the net.
5. **Australia’s Compounded thyroid:** Desiccated thyroid in Australia is mostly done through compounding pharmacies and is usually called “thyroid extract”. A patient asked Australian Custom Pharmaceuticals, Australia’s largest compounding-only pharmacy, about their ingredients. It was stated that the only ingredients put in the capsules are the active ingredient (thyroid extract) and microcrystalline cellulose as the filler. At ACP 60mg (equivalent to 1 grain) contains 33.4 mcg T4 and 8.37 mcg of T3. However, together

T4 and T3 may potentiate each other giving a therapeutic effect equivalent of 25 mcg of T3 and 100 mcg of T4 per 60mg The thyroid extract in porcine derived, and it is bought from an overseas supplier.

6. **Canada's "Thyroid"**, formerly by Pfizer and is now by Erfa<sup>27</sup>. They come in 30, 60 and 125 mg tablets and can be done sublingually the way Armour used to be. They contain:

- Dried Thyroid
- Magnesium Stearate
- Cornstarch
- Talc
- Sugar

Erfa's Canadian Thyroid has slightly different ratios than the USP ratios of US brands:

**In each Erfa 30 mg tablet embossed "ECI 30"**, there is 18 mcg of T4 and 4 mcg of T3 (as compared to 19/4.5 in US brands) This is equivalent to the US one-half grain.

**In each Erfa 60 mg tablet embossed "ECI 60"**, there is 35 mcg of T4 and 8 mcg of T3 (as compared to 38/9 in US brands) This is equivalent to the US one grain.

**In each Erfa 125 mg tablet embossed "ECI 125"**, there is 73 mcg of T4 and 17 mcg of T3 (as compared to 76/18 in US brands) This is equivalent to the US two grains.

The Erfa website is <http://thyroid.erfa.net/>.

7. **Denmark's Thyreoïdum** from Biofac in Kastrup, Denmark. Imported into the Netherlands from BUFA/Fargo, importers of pharmaceutical products.

½ grain = 29 mg (12.7 mcg T4 and 4.5 mcg T3)

1 grain = 57 mg (25.3 mcg T4 and 9 mcg T3)

2 grain = 114 mg (50.6 mcg T4 and 18 mcg T3)

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<sup>27</sup> [www.erfa-sa.com/thyroid\\_en.htm](http://www.erfa-sa.com/thyroid_en.htm)

Pig thyroid. Some websites state the T4/T3 ratio can vary from 2.3: 1 to 3.8: 1 depending on the lot. Meets standards of US Pharmacopoeia. Contains Microcrystalline cellulose as a filler. Also may contain lactose, sodium, chloride, starch, sucrose or glucose.

8. **Germany's Thyreogland** (now **SD Extrakt**) from Munchen (Munich), Klosterl Apoteke, Waltherstrasse, 80337 Muenchen. Phone: 089 54343211

1 grain Armour = 100 mcg levothyroxine = 40 mcg Thyreogland. Clear gelatin capsules with loose powder inside. May have magnesium searate as a filler. The 25 mcg tablet specifies (25 mcg T4 and circa 6 mcg T3) on the label. Also sent to me: the Klosterl Apotheke (pharmacy) Munich Tel: 0049 (0)89 / 54 34 32 11 offers 4 different strengths: 25 mcgr T4+5.9 mcgr T3; 50 mcgr T4+11.8 mcgr T3; 75 mcgr T4+17.8 mcgr T3; 100 mcgr T4+23.7 mcgr T3. The 75 mcgr one is nearly exactly the equivalent of 2 grains of Armour. Also they add the amino acid tyrosine in the capsules as a filler. She advises all Germans to phone them and get the leaflet. It's more or less the only information about natural thyroid treatment available in Germany that one can take to a doctor.

Also available in Germany: compounded pork thyroid, aka Schilddruesen-Extrakt, in different grains. Obtained from pharmacy Receptura, Altenhoeferallee 3, 60438 Frankfurt am Main, Germany.

9. **New Zealand's Whole Thyroid**, which is compounded desiccated thyroid by Pharmaceutical Compounding New Zealand (PCNZ). Website: <http://www.pharmaceuticla.co.nz/>.

10. **Generic by Acella called NP Thyroid**: In late 2010 came the appearance of a generic version of desiccated thyroid made by Acella Pharmaceuticals LLC in Alpharetta, Georgia (formerly Brookstone Pharmaceuticals). Inactive ingredients include calcium stearate, dextrose monohydrate, maltodextrin and mineral oil. Comes in strengths of 30 mg,

60 mg and 90 mg.

Some patients report it's weaker than other brands, but are pleased.

**11. Nutri-Meds Porcine or Bovine** is a non-prescription brand of natural desiccated thyroid. The porcine contains:

- Whole Desiccated Thyroid Concentrate – Porcine
- Raw Porcine Thyroid Tissue 130 mg
- Dicalcium Phosphate
- Magnesium Sterate (Natural Tableting Agent) The bovine version (as of 2011) contains:
- Whole Desiccated Thyroid Glandular Concentrate – Bovine
- Rice Powder
- Magnesium Stearate
- Gelatin (from free range sources)

Other comments from the Nutri-Meds website:

“Our glandulars are imported from New Zealand and Argentina, countries with long histories of grass-pasturing their animals, using no hormones or antibiotics, and have no proximity to countries with BSE. The gelatin we use for our capsules are from the same sources. We do not use USDA gelatin. We consider it way below par.”

Patients report that over-the-counter thyroid products, including Nutri-meds, are far weaker than all the brand names, so they have to take quite a lot. Yes, they may be good in a pinch for help. Not sure about long term support, tho some like them.

**12. ThyroGold** is an over-the-counter dietary desiccated thyroid product formulated by Dr. John C. Lowe. They contain freeze-dried bovine thyroid powder, 300 mg, from pasture-fed cows in New Zealand, as well as 25 mg *Coleus forskohlii*. Many patients like it, and some state it is very strong, so all they take is one capsule. If one starts on ThyroGold, patients

pour the powder out, divide, and take much less, such as 1/4 of the entire contents, then move up by 1/4 at a time.

## **Ingredient Explanations<sup>28</sup>:**

### **Nature-Throid™ Inactive Ingredient Disclosure:**

**Carnauba Wax** - Derived from the pores of the leaves of the Brazilian wax palm tree. It is utilized in the final stage in tablet coating (to provide a complete seal).

**Colloidal Silicon Dioxide** - Derived from a mined ore. It is typically utilized as a natural desiccant in a tablet (to provide barrier from moisture and humidity).

**Dicalcium Phosphate** - Derived from a mined ore. It is typically utilized as a binder in a tablet (to hold all the ingredients during compression).

**Hypromellose (Hydroxypropyl Methylcellulose)** - Derived from a plant cellulose base (typically cotton blend and or wood pulp). It is typically utilized as a granulating agent in a tablet (to provide bulk and density to the tablet for proper compression) as well as part of a clear coating solution (with PEG).

**Lactose Monohydrate\*** - Derived typically from a dairy source.

This ingredient is NOT added as a separate ingredient during formulation. It is a diluent base contributed from Thyroid USP powder (per USP monograph).

**Magnesium Stearate** - Derived from a vegetable source (typically palm oil). It is typically utilized as a lubricating agent in a tablet (to aid in proper compression of the tablet).

**Microcrystalline Cellulose** - Synthetically derived fiber (similar to plant-derived). It is typically utilized as a filler in a tablet (to provide volume and bulk).

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<sup>28</sup> [www.nature-throid.com/inactive.asp](http://www.nature-throid.com/inactive.asp)

Polyethylene Glycol (PEG) - Synthetically derived. It is utilized with Hydroxypropyl Methylcellulose as part of the clear coating solution.

Sodium Starch Glycolate - Synthetically derived starch molecule (similar to potato starch). It is typically utilized as a disintegrating agent in a tablet (to aid in proper disintegration of the tablet in the stomach).

Stearic Acid - Derived from a vegetable source (typically palm oil). It is typically utilized as a binder in a tablet (to hold all the ingredients during compression

# Addendum B

## Vegetarian or Religious Restrictions on the use of pork

There are two main reasons why someone might be concerned about the fact that prescription desiccated thyroid is from pigs: *vegetarianism and religious practices.*

The practice of Vegetarianism involves a strong belief in abstaining from the consumption of meat, fish, and poultry, which definitely includes pig, aka pork products. The choice to be a Vegetarian is born from a variety of reasons: the quest for better health, religious beliefs, or political concerns about the treatment of animals.

Religious restrictions on the consumption of pork in specific are found in the Jewish and Muslim religions, as well as certain Christian Orthodox practices.

In these cases, the alternative to desiccated pig thyroid can be found in the use of adding Synthetic T3 to Synthetic T4. T3 products have the brand names of Cytomel, Cytomal/Ti Tre, Tertroxin, and Mexican Cynomel or simply sodium liothyronine.

Your doctor can prescribe any of the above. Though patients who take this route report that it didn't give them the excellent results that desiccated thyroid gives, it's the next best step from T4 alone.

Another alternative is the use of an over-the-counter bovine desiccated thyroid. Nutri-meds is a popular choice for a bovine thyroid, and there are others you can explore on the internet or by visiting your local health food store. Over-the-counter bovine or porcine desiccated thyroid products are quite weak, so you will



have to take much more than prescription porcine desiccated thyroid.

Another alternative is to consider the stance taken by Serene Shick. Serene is a vegan and Messianic. She found herself with many symptoms of hypothyroid, and did a great deal of research. She concluded that desiccated thyroid was her treatment of choice, in spite of her vegan choice:

*All the evidence points to this being the superior medication for this illness, although most docs want to give the synthetics. Armour is all natural, which appeals to me in spite of the fact that it is derived from pigs. As you know, being vegan and Messianic, this doesn't sit well, but I have come to believe that what makes my body/brain/ temple perform optimally takes precedence over the desire to exclude all animal products from my diet as well as the mitzvah against pork. It is a very tiny amount and I am already feeling incredibly better: my thinking is clearer, I feel more in control of my emotions, and I am actually having frequent moments of real joy! So I am certain that YHVH has led me to this discovery<sup>29</sup>.*

As far as Judaism, the use of desiccated pig thyroid may be more tolerated if the tablet is swallowed rather than done sublingually, which may not violate Dietary Laws. Additionally, since the use of desiccated thyroid involves saving a life and mind, it may not be a problem.

# Addendum C

## Labwork Definitions plus How to Interpret Your Labs

### TSH:

Abbreviation for Thyroid Stimulating Hormone. Unfortunately, the TSH lab test has been the darling of the medical establishment for potential diagnosis for thyroid disease. It's considered "a reliable gauge of your thyroid function as well as accurate guide to determine the right dose of thyroid medications" by medical professionals. It's considered a measurement of your own internal TSH which is secreted by your pituitary gland to stimulate your thyroid gland.

The standard normal range was 0.5 to 5.0, with hyperthyroid occurring below 0.5, and hypothyroid occurring above 5.0. In 2003, the American Association of Clinical Endocrinologists recommended that the new range be 0.3 to 3.04. To this day, some facilities still use the old range. The range is established by the screening of a group of volunteers who are considered Euthyroid i.e. without thyroid disease.

**Criticism:** Patients have repeatedly found the TSH lab result to lag behind for years, even in the presence of obvious hypothyroid symptoms, before the result goes above the range to reveal hypothyroidism. Additionally, once on an optimal amount of desiccated thyroid, patients find their TSH lab result far below range, yet they have not one iota of hyperthyroid symptoms.

**Benefits:** The one area where the TSH is helpful is in the diagnosis of a pituitary dysfunction, especially Hypopituitarism.

If the TSH is low, in conjunction with a low free T3 or free T4, and especially in the presence of hypothyroid symptoms, it's a clue that your pituitary is not functioning correctly.

### **Free T3:**

Free represents what is unbound from protein and available for use and metabolically active. T3 (Triiodothyronine) is the active thyroid hormone. If not on medication, a high level would represent hyperthyroidism, and a low level would represent hypothyroidism.

On desiccated thyroid medication, the free T3 is at the top upper end of the normal range, and sometimes over, at the same time that all symptoms are removed (in the presence of strong adrenals or adequate cortisol, plus good blood pressure and heart rate). With low cortisol, the free T3 will be in the upper part of the range in the presence of continuing hypothyroid symptoms, or will be low with a high Free T4, pointing to excess RT3.

Patients and certain doctors wisely recommend the use of this test for additional information.

### **Free T4:**

Free represents what is unbound from protein and available for use. T4 (Thyroxine) is the storage thyroid hormone meant to convert to the active hormone T3, as needed. If not on medication, a high level would represent hyperthyroidism, and a low level would represent hypothyroidism.

On desiccated thyroid medication, many patients find their free T4 is approximately mid-range (sometimes higher) along with a free T3 at the top of the range, at the same time that all symptoms are removed.

Patients and certain doctors wisely recommend the use of this test for additional information.

### **T3 (not recommended by patients):**

Without a *free* in front, this is the Total T3, or the total amount of both usable and non-usable circulating thyroid hormone. It may be useful in the diagnosis of hyperthyroid, but patients and certain doctors find this test useless for hypothyroid diagnosis,

since there is no idea what part of the result represents what is available for use. Additionally, pregnant women tend to naturally have higher total T3.

### **T4 (not recommended by patients):**

Without a *free* in front, this is the Total T4, or the total amount of both usable and non-usable circulating thyroid storage hormone, which represents more the 99% of the T4. It may be useful in the diagnosis of hyperthyroid, but patients and certain doctors find this test useless for hypothyroid diagnosis, since there is no idea what part of the result represents what is available for use.

### **Reverse T3 (RT3):**

A measure of the inactive form of T3. T4 converts to RT3 normally when the amount of T4 isn't needed, after surgery or an accident, or during an acute illness. But in the presence of adrenal dysfunction, low ferritin/low iron, low B12 and other chronic conditions, T4 can convert to excess amounts of RT3, which in turn, compete with the same cell receptors as T3. It's recommended that the RT3 lab test be done at the same time as a free T3 to compare the ratio. See Chapter 12.

### **TPO/Anti-TPO or Antithyroid Peroxidase Antibodies:**

A measure of the antibodies which attack your thyroid peroxidase, an enzyme that plays a part in the production of thyroid hormones and T4 to T3. Helps diagnose Hashimoto's disease along with the TgAb lab test below. TPO antibodies can also be found with Graves's disease, though in lower amounts.

### **TgAb/Thyroglobulin Antibodies:**

A measure of the antibodies which attack the key protein in the thyroid gland—the thyroglobulin—essential in the production of the T4 and T3 thyroid hormones. Along with the Anti-TPO, helps diagnose Hashimoto's disease.

Some patients find that they can be normal in one antibodies test and not in another, so both TPO and TgAb are recommended to diagnose Hashimoto's disease.

### **T3 Resin Uptake/T3RU (not recommended by patients):**

A test that measures the level of thyroid hormone-binding proteins in the blood. Can be used to diagnose hyperthyroidism along with other tests.

Patients and certain doctors find this test unnecessary when hypothyroidism is suspected and is a general waste of your money.

### **Free Thyroxine Index (FTI or T7) (not recommended by patients):**

Along with the T4 and T3 Uptake, this test tells you how much thyroid hormone is free and unbound. It has been replaced by the free T4 test.

Patients and certain doctors find this test unnecessary when hypothyroidism is suspected and is a general waste of your money.

### **TRH:**

Abbreviation for *TSH Releasing Hormone*. In your body, the TRH is released by the hypothalamus in order to tell the pituitary to release TSH. This test will see if the TSH goes up enough after the administration of the TRH. If your TSH goes up too far after the TRH is administered, it implies you may be hypothyroid. If you already have too much thyroid hormone, the administered TRH will not cause a rise in the TSH, making the test sensitive in detecting early hyperthyroidism.

This test is also used for cancer patients to see if they are on enough medication, or to ascertain the functioning of your pituitary gland.

This test is not used much anymore, since clinicians feel the TSH test alone replaces it.

**TSI:**

Abbreviation for Thyroid Stimulating Immunoglobins which will implicate Graves hyperthyroid as well as Graves ophthalmopathy or pretibial myxedema (bugged eyes). Rather than destroying tissue, the TSI antibodies react with your TSH receptors, causing them to tell your thyroid to produce far more.

Some Hashimotos patients can also have elevated TSI without having Graves.

**Thyroid Scan or Radioactive Iodine Uptake:**

This test is usually ordered by your doctor if there is an enlargement of your thyroid. It will produce a picture to help evaluate lumps or inflammation.

There are two types: one simply a scan to produce the picture, and the other is a *Radioactive Iodine Uptake*, which measures the absorption in your thyroid after you are given a dose of radioactive iodine in pill form. The amount of iodine detected in your thyroid will correspond to the amount of hormone your thyroid is producing.

Scans help identify whether nodules are hot or cold (determining possible cancer). Hot nodules are not usually cancerous.

Criticism: some patients have felt like the use of the scan was overkill when it was simply obvious they had Hashimotos disease, which is treated with adequate doses of desiccated thyroid, and in many, the removal of gluten from their diet.

**Ultrasound:**

This is a test which uses sound waves in a high frequency to produce an image of your thyroid gland and possible nodules.

It will tell your doctor if nodules found are solid or fluid filled and their size. It does not ascertain cancer.

Criticism: some patients have felt like the use of the ultrasound was overkill when it was simply obvious they had Hashimotos disease, which is treated with adequate doses of desiccated thyroid, and in many, the removal of gluten from their diet.

## Thyroid Needle Biopsy:

This test involves putting a very fine needle through your skin and into your thyroid to obtain a sample of your tissue, and to tell whether a cold nodule is from cancer or is benign. It's thought to be safe, easy and an effective method to know whether you have cancer or not.

## HOW TO INTERPRET RECOMMENDED THYROID, ADRENAL AND RELATED LABWORK:

**24-Hour Cortisol Saliva:** Those with healthy adrenal function will have the following results:

*8 am: at the literal top of the range*

*11 am-noon: in the upper quarter*

*4-5 pm: mid-range*

*11 pm to midnight: at the very bottom.*

In the first stages of adrenal/HPA dysfunction, you'll see higher and higher results. In the next stages, when the adrenals are falling over the hill, you'll see a mix of highs and lows. In the more severe stages, you'll see all lows.

**AB (Antithyroglobulin) Test for Hashimotos:** Generally, if this is above the range, you've got the autoimmune thyroid disease Hashi's. If the result is below the "less than" mark, or in the range provided, you may be fine, but you need to have done the other antibody test, TPO, as well. If either are below or "in" the range, but moving up, time to support your immune system. (See Chapter 8.)

**ACTH Stim:** Your cortisol levels will double if your adrenals are not diseased.

**Aldosterone:** An adrenal hormone which helps regulate levels of sodium and potassium in your body. If you are mid-or-below in the range, which is often 4.0 – 31.0 ng/dl, there is reason to be suspicious that your adrenals aren't producing enough, since healthy adrenals will generally put you in the

upper range.

This is best tested in the morning and with no salt intake for 24 hours. Women need to do it in the first week after their period, since rising progesterone can also raise your aldosterone. Center of this range is 17.5. Testing should not be done with severe illness (aldosterone falls in response to severe illness), during periods of intense stress (aldosterone rises), or right after strenuous exercise (aldosterone rises). Being pregnant can result in doubled amounts of aldosterone.

**B12:** You are looking for an optimal B12 lab result at the top part of the range. It is not optimal to simply be “in range”. If your range is similar to 180-900, a healthy level is 800 or higher. In the 500-800 range, you can benefit from taking B12 lozenges, specifically Methylcobalamin. It has been shown in studies that patients with labs under 350 are likely to have symptoms, which means the deficiency is very serious and has gone on for a few years undetected. It is suggested that lab ranges are much too low for B12; in Japan the bottom of the range is 500.

The urine test Urinary Methylmalonic Acid, also called the UMMA, can be added since it is a very sensitive detection and if high, will reveal a true B12 deficiency.

**DHEA:** as the mother of all steroid & sex hormones, a DHEA above midrange is good, but 8 can mean the adrenals are compensating for a problem.

**Ferritin plus all iron tests:** If your Ferritin is less than 50, your levels are too low and can be causing problems, as well as leading you into anemia as you fall lower, which will give you symptoms similar to hypo-, such as depression, achiness, fatigue. If you are in the 50's, you are scooting by. Optimally, patients shoot for 70-90 at the minimum. If your ferritin is much higher, you could have hemochromatosis, a genetic disease in which too much iron is absorbed, or it



could be caused by an on-going inflammation, liver disease, alcoholism, diabetes, asthma, or some types of cancer. Men are generally higher than women without having the above problems.

Because inflammation can lead to so-called normal ferritin, you will want other iron labs. Serum iron should ideally be around 110, or higher for men. TIBC should be around a quarter above the bottom, % Saturation is ideally between 25 – 45 (for US ranges), with men falling in the upper area. See Chapter 13 for more detail.

**Folate:** Also called folic acid, this is a b-vitamin which can be low in hypothyroid patients. Folate is important for prenatal development, as well as your blood cell health. Folate works with B12 in the use and creation of proteins.

**Free T3:** Those on an optimal amount of desiccated thyroid, with no lingering hypothyroid symptoms and in the presence of healthy adrenals, tend to have a free T3 at the top of the range.

If you are on desiccated thyroid (especially if lower than 3 grains) and find yourself with the free T3 high or above range in the presence of continuing hypothyroid symptoms, or even hyper-like symptoms (anxiety, shakiness), it's a clue you have adrenal dysfunction or low ferritin/iron.

If not on thyroid medication: 1) If your free T3 is high, you could have Hashimoto's disease, which will need the two antibodies tests to discern it, or Graves disease, which needs the TSI test. 2) If your free T3 is mid-range or lower, and in the presence of hypothyroid symptoms, you may have hypothyroidism, no matter how low the TSH. 3) If your free T3 is low and free T4 is high, you need to find your RT3 ratio. (See Chapter 12.)

**Free T4:** Those on an optimal amount of desiccated thyroid will generally find this mid-range or slightly higher, along with a free T3 at the top, and in the presence of healthy adrenal function. Those on T3-only can find themselves slightly over range when optimally treated.

**Magnesium (RBC, aka Red Blood Cell rather than Serum):**  
You are looking for an RBC magnesium result mid-range or slightly higher.

**Potassium (RBC, aka Red Blood Cell rather than Serum):**  
Generally, a healthy potassium level is in the upper part of the range. If too high, it's called hyperkalemia; when too low, hypokalemia. It can rise in the presence of low aldosterone, then fall.

**Renin:** Done in conjunction with the aldosterone tests. If renin is high in the range along with a low aldosterone, you have an adrenal cause. If both hormones are low in the range, you have a pituitary problem. Always tested along with Aldosterone to see if your problem is due to the adrenals (primary adrenal insufficiency) or your pituitary (secondary adrenal insufficiency).

**Reverse T3 (RT3):** This test has to be done at the same time you do the free T3, and you then measure the ratio between the two by dividing the RT3 into the Free T3. Too high levels of RT3 will result in a ratio of 19 or under when doing the ratio (See Chapter 12.)

**Sodium:** Healthy levels are midrange and sometimes higher.

**Thyroid Peroxidase Antibody (TPO) test for Hashimotos:**  
Generally, if this is above the range, you've got the autoimmune thyroid disease Hashi's. If the result is below the "less than" mark, or in the range provided, you may be fine, but you need to have done the other antibody test, then AB, as well—the AB shown above. (See Chapter 8.)

**TIBC** (Total iron binding capacity) test: measures whether a protein called transferrin, produced by the liver, has the ability to carry iron in the blood. Used to determine anemia or low body iron. If your result is high, and in the absence of chronic disease, you may be anemic.

**TSH:** Creators of the TSH lab test came up with a range that supposedly corresponds with healthy thyroid function. So theoretically, if your TSH lab results are higher than the range, it would imply something is triggering your actual TSH to be a little too active in screaming at your thyroid. That something would be a diseased thyroid, called hypothyroid.

But there are problems with this method of diagnosis. First, you can have a so-called normal result, yet be clearly hypothyroid with symptoms. Why? Because the TSH test cannot measure if all your cells & tissue are receiving the released thyroid hormones. Some may be (thus the normal TSH result) and some may not be (thus your clear symptoms). Second, if you have Hashimoto's, your lab results can swing between hypo- and hyper, & your lab test may be representing the middle of the swing.

The best way to use the TSH lab test is in diagnosing a pituitary problem, not a thyroid problem. A very low TSH with a low free T3 gives away a pituitary issue.

**Vitamin D: (25-hydroxyvitamin D):** 60-80 at the minimum is your goal in the range: 80-100 is considered cancer protective. Many thyroid patients are low in D due to digestive issues from being undiagnosed or undertreated, plus problems with Celiac or gluten intolerance.

**T7, Total T3, Total T4, Uptake, or any other thyroid labs:**  
A waste of your money, exclaim thyroid patients.

# Addendum D

## Lab Facilities and How to Prepare for Them

The beauty of most of these facilities is that you can use the test kits right in your own home, or you can go to a recommend lab facility. Most don't require a prescription.

The results can be shared with your doctor for further analysis. And for adrenals, I strongly recommended that you read Chapters 5 and 6 to be knowledgeable yourself. I have included notes after each facility. Note: both California, New Jersey and New York have had previous restrictions in the use of saliva labs which may or may not be in effect as you read this. (*California health law has required a written order from your health care Professional, and New York health law has prohibited both the testing of specimens collected in or mailed from New York as well as the transmission of data from the laboratory to you.*) Some have been bypassed in cooperation with individual lab facilities. But you'll want to find out if you live in either of these states by contacting the lab facility.

**Note:** *When it comes to saliva testing, patients have found the sex hormone profiles (estrogen, progesterone, and testosterone) to be confusing for saliva results. They can especially be skewed for females on topical creams. We also do not trust saliva results for thyroid antibodies, as when blood work showed they were there, saliva didn't for some.*

*For cortisol, it seems to correspond well if the saliva samples were sent with overnight delivery. See above if you are in New York or California.*

For saliva, always use the more expensive overnight delivery via your post office. Long deliveries can result in degradation of your saliva sample and results which do not correspond to your symptoms.

## **1. HEALTHCHECK USA:**

Lab packages designed specifically for readers of Stop the Thyroid Madness. Use the discount code *STTM10* which will give you 10% off the already low prices! You can choose saliva for cortisol, or use LabCorp facilities around the US for blood draws. <http://blog.healthcheckusa.com/other-information/stop-the-thyroid-madness/>.

## **2. DIRECT LABS:**

Lab packages designed specifically for readers of Stop the Thyroid Madness. IMPORTANT NOTE about using this page: you will need to use scroll down bar just to the right of the yellow "Add to Cart" to view all labs they offer. No saliva for cortisol. <http://www.directlabs.com/Default.aspx?alias=www.directlabs.com/sttm>.

## **3. MY MED LAB:**

Lab packages designed specifically for readers of Stop the Thyroid Madness. You can choose saliva for cortisol (which is 4-6 times in a 24 hour period) or use LabCorp for blood draw. <https://sttm.mymedlab.com/products/325>.

Additional US lab facilities include ZRT, Vitamin Research Products, Canary Club, EconoLabs, and more.

## **4. CANADA:**

Patients can order from Rocky Mountain Analytical. [www.rmalab.com](http://www.rmalab.com)

## 5. FINLAND:

Test kits from Genova diagnostics via MDD Terveyspalvelut:  
<http://www.mdd.fi/>.

## 6. GERMANY:

Saliva testing and helpful facility. <http://www.hormonselbsthilfe.de/>.

## 7. UNITED KINGDOM LAB 21:

Click on Chemical Biochemistry to find saliva: <http://www.lab21.com/healthcare/index.php#>.

## 8. UNITED KINGDOM RED APPLE CLINIC:

Thyroid, Adrenals, and others. [www.redappleclinic.co.uk](http://www.redappleclinic.co.uk)

## 9. AUSTRALIA HEALTHSCOPE *(used to be Analytical Reference Laboratories (ARL))*

In Melbourne, Victoria, Australia. Phone 1300 53 688 and you can ask for the name of a doctor or naturopath who uses their tests. <http://www.healthscopepathology.com.au/>

**NOTE:** *several labs above provide you with the term "Cortisol Burden" and a number. Cortisol Burden is the combined value of all 4 saliva cortisol readings for the awake period of that particular day. It can tell you if you are making more or less than the average.*

About ranges: Each lab facility can have different ranges, so it's important to evaluate your results by the ranges provided by the lab facility you used.

## Places to order an Iodine Loading test:

1. **Hakala Research Labs:** at 877-238-1779 or
2. **FFP Labs:** 838-684-3233 or 877-900-5556

## **Preparation for labwork**

- **Thyroid:** you can take your thyroid meds as usual the day before, but don't take your thyroid meds the morning of and before the actual blood draw.
- **Saliva or blood cortisol:** you will need to be off all cortisol or adrenal supports and herbs of any kind for two weeks.
- **Aldosterone:** fast totally from salt for a minimum of 24 hours, and be upright and moving for at least an hour before testing. For women: Test on day 2-3 of your menstrual cycle, or right after it ends, and as close to 8 am as possible; never after 10 am. Be sitting up when blood is drawn. Test your Sodium and Potassium at the same time.
- **Electrolytes (Potassium, Magnesium, Sodium, Calcium, etc):** some recommendations state to avoid them the day before; others say to simply avoid them on the day of the test until after your test is done. For potassium testing, remind the lab tech to avoid using the tourniquet, since prolonged use can give a false high reading of potassium.
- **B12:** stop eating or drinking when you go to bed the night before. i.e. fasting for the blood draw.
- **Ferritin/iron:** stop taking any iron supplements, or eating iron rich foods, for at least 12-24 hours before testing. Some doctors will ask for a five day fast from iron.
- **Vitamin D:** fasting the day of the test.
- **Sex hormones:** if you are already supplementing with hormones, do your test 12 hours after your last dose, i.e. take none before the lab. If you are using topical (on the skin) or sublingual hormones, it's best to do serum (blood) testing rather than saliva.

# Addendum E

## How To Find A Good Doctor

A needle in the haystack can best describe how hard it is for patients to find a good doctor for knowledgeable thyroid and adrenal care. There is hardly a patient alive who hasn't encountered doctors who make some or all of the following mistakes:

- Ordering lab tests that are lousy in detecting hypothyroidism, such as the TSH and total T4
- Viewing lab tests and their ranges as from God Almighty
- Prescribing only T4-only medications
- Being completely ignorant about the efficacy of desiccated thyroid
- Having poor knowledge about adrenal dysfunction or how to treat it
- Dismissing your own wisdom about the body you live in
- Putting you on other medications which end up bandaidding poor thyroid treatment
- Sending you to other doctors as if the answer to your continued problems is mysterious or in need of a "specialist" like an Endocrinologist

But if you work hard and do your homework, you can succeed in finding one who will do most of it, if not all, correctly, as outlined in Chapter 3: What Thyroid Patients Have Learned: the Bible of our Experience. Or, at the very least, you can find a doctor who is open-minded to what you have learned from this book and the experiences of hundreds of thousands of thyroid patients.

A good doctor is one who will willingly prescribe desiccated thyroid; will test the free T3 and free T4 plus both antibodies; will dose you by symptoms first and foremost, with labs as simply



adjuncts for more information; will pay attention to symptoms of adrenal dysfunction and treat it adequately before raising your desiccated thyroid; and a doctor who will allow the relationship to be a team—his knowledge combined with your own.

So how do you find a good doc? Here are a variety of ways to choose from, and they are in no particular order.

- 1) **Visit with Pharmacists:** A successful way to find a good doctor is to approach the Pharmacist (not simply the employees) at a large pharmacy, and ask who tends to prescribe desiccated thyroid. Most Pharmacists are friendly and will let you know. Don't hesitate to go to more than one Pharmacy. To strike Bingo, see if there is a Compounding Pharmacy nearby or check your Yellow Pages for one, or go to Google and type in your city and "compounding pharmacy". Doctors who use Compounding Pharmacies tend to prescribe desiccated thyroid!
- 2) **Check out good Physician Groups websites:** Try the American College for the Advancement for Medicine website at [www.acam.org/](http://www.acam.org/), or the Functional Medicine website at [www.functionalmedicine.org/](http://www.functionalmedicine.org/), or doctors who are board certified in Environmental Medicine here: [www.aeonline.org/](http://www.aeonline.org/).
- 3) **Seek Broda Barnes trained doctors:** Broda Barnes doctors understand the importance of using desiccated thyroid in treatment! [www.brodabarnes.org/](http://www.brodabarnes.org/) Also, email here: [info@BrodaBarnes.org](mailto:info@BrodaBarnes.org) and see if they can help you find a Broda Barnes doctor in your area. Downside: you may be asked to pay for a list for your area.
- 4) **Find an Osteopath:** Also called DO's, Osteopaths can be overall more open-minded. [www.osteopathic.org/](http://www.osteopathic.org/)
- 5) **Saliva Lab Facility listing of doctors:** A doctor who uses saliva labs may be a doc more open-minded about desiccated thyroid, and perhaps even cortisol.
- 6) **Patient feedback:** Join thyroid patient groups on Yahoo or Facebook for recommendations from patients about good doctors they have found. There can also be private lists on these groups.

- 7) **Older doctors:** some of the oldest doctors who are still practicing are likely to remember the successful use of desiccated thyroid and may be open to using it.

**IMPORTANT:** *no doctor is going to be perfect. Medical school/licensing boards/pharmaceutical reps/continuing education make them imperfect. So no matter how wonderful a doc looks, you have to be your own best advocate by being knowledgeable when you walk in. Be friendly yet firm about what is right for you. Stop giving your power away when you enter the doctor's office. It's your body and your wisdom, too.*

*The below letters can be used, as well, and are meant to be changed as you deem to fit your personality. The second one should be shortened to meet your specific requests.*

### **1. DEAR DOCTOR TEMPLATE LETTER (to be used when finding a new doctor)**

Dear Dr. \_\_\_\_\_,

Hello. I am looking for a doctor who will allow me to be an active participant in my health care, and see us as a team—your knowledge, plus my own. I have knowledge about thyroid treatment in specific, plus information on low cortisol issues and treatment. Additionally, I live in my own body and understand how it feels better than anyone else.

Namely, I would like to have treatment for my thyroid in the following manner:

- 1) the use of desiccated thyroid to treat my hypothyroid
- 2) dosing by symptom elimination first, not labs
- 3) when labs are used: the free T3 and free T4, TSH to detect a pituitary problem only; both antibodies labs to rule out Hashimotos, Ferritin plus other iron labs, B12, Vit. D, plus other labs as recommended by you for good health evaluation.
- 4) the use of Hydrocortisone to treat my low cortisol, if necessary, and the use of specific methods I have learned about to know if I'm on a physiologic dose adequate for me.

If you feel comfortable with all the above, you and I are the right fit. My contact information is below, and I can also call you.

Sincerely,

## 2. DEAR DOCTOR TEMPLATE LETTER (to be used for your existing physician if you feel there is hope continuing to use him or her): may need to shortened

Dear \_\_\_\_\_,

Since I have been on \_\_\_\_\_, I continue to have the following hypothyroid symptoms: (*see Chapter 1 for the list of symptoms that match your own.*) I know that you can recommend that I increase my \_\_\_\_\_, or that I take other prescription medications to help my other symptoms. I also know that you can recommend that I add Cytomel to my regimen.

But Dr. \_\_\_\_\_, I would prefer to go on a medication called desiccated thyroid that is FDA approved, meets the stringent guidelines of the U.S. Pharmacopeia, and that patients were successfully taking before T4-only medications were ever widely used. Desiccated thyroid gives me exactly what my own thyroid gives me—T4, T3, T2, T1 and calcitonin.

That makes a lot of sense to me. I have heard that some doctors will say that desiccated thyroid is unregulated, inconsistent, unreliable, or outdated. But apparently, patients I know who are on it are not finding any of those to be true! They state that they feel MUCH better on desiccated thyroid than on T4-only medications.

When I start on desiccated thyroid, it is my understanding that one grain or so is a safe starting amount. After 1-2 weeks on my starting dose, I would like to raise my dose approx. ½ grain every few weeks according to the elimination of symptoms, and NOT by the TSH range, since the TSH is simply a pituitary hormone, and thus doesn't accurately measure my thyroid levels with the addition of oral thyroid hormones.

Once I get up to approx. 3 grains, I'd like to hold each dose about 4 - 6 weeks to allow the T4 to build in my system, and get more accurate symptom & lab results.

As far as labs, I'd prefer to keep track of my free T3 and

free T4. Patients on desiccated thyroid are stating that when they completely rid themselves of symptoms, they have a free T3 towards the top of the range, a midrange free T4, and a suppressed TSH, with no hyper symptoms whatsoever.

(When I do labs, I will NOT be taking my desiccated thyroid ahead of time to give a more accurate reflection of my T3 levels.) I will also be splitting my pills in two or more doses a day to spread the direct T3 out during the day.

Also, I'd like to test my adrenals with a 24-hour adrenal saliva test rather than a blood or urine test—the former which tests my cortisol at 4 important times during a 24 hour period. I'd also like to do a Ferritin test plus iron, since low Ferritin (below the 40's) appears to be common and causes problems as I try to raise my desiccated thyroid.

Finally, I am hoping that you and I can be a team since I live in my own body and can have my own knowledge. If you can work with me on the above, I think we can make a fine team.

Sincerely,



# ADDENDUM F

## Interpreting Your Cortisol Saliva Lab Results

The following information was brilliantly created and compiled by Bob Harvey, a thyroid, adrenal and hypopituitary patient, and is based on DiagnosTech lab results, though patients use different lab facilities as well. He also uses some information from Genova Labs and ZRT. It is his hope that you will gain better understanding about your saliva cortisol lab work and the stages of your adrenal dysfunction as you work closely with your doctor. *\*\*Please note that this Addendum is not meant to be a recommendation for any particular saliva lab facility.*

\*\*\*\*\*

Dr. Lam says on this website: *The best way to test your adrenal health is to measure your level of free key adrenal hormones such as cortisol and DHEA. Saliva testing is preferred as it measures the amount of free and circulating hormones instead of the bound hormone commonly measured in blood test.*

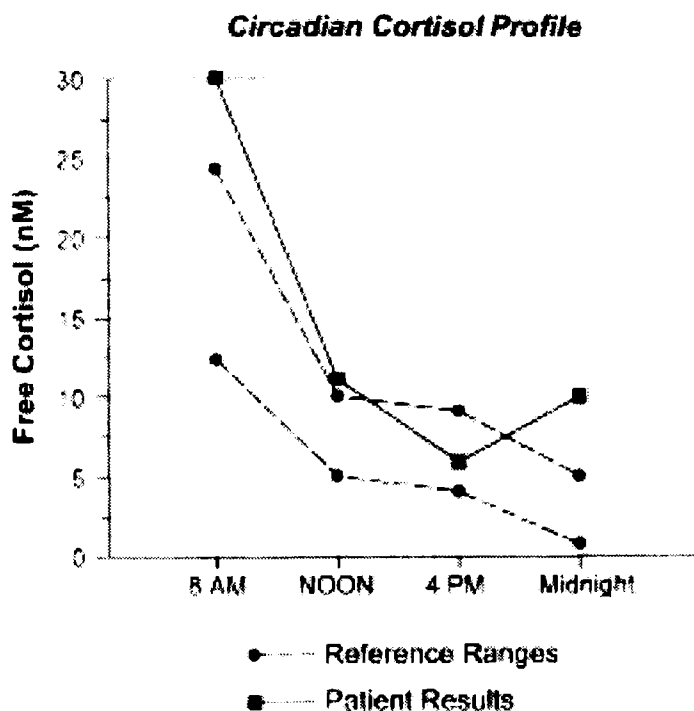
The first lab to test cortisol levels in the saliva was DiagnosTech. Their web site has a list of doctors that use the lab, and if you have trouble finding a Doctor near you, the lab kit can be ordered directly by the patient 3.

Unlike a single blood draw in the morning, the Diagnos-Tech lab result shows the amount of cortisol at 4 points of the day. The main things you are looking for in your cortisol labs are:

1. The quantity of Cortisol, high or low.
  2. The rhythm. You want it to be as normal as possible.
- In the first figure the cortisol is a bit higher than normal.

Doctor Hans Selye theorized that elevated cortisol is the body's initial reaction to stress.

The solid black line shows that this person's cortisol is higher than normal at the beginning and end of the day. The lab will print out the cortisol amounts from the 4 points in the day, compared to the normal range.



**Figure -1.**

**Free Cortisol Rhythm**

|                  |    |          |          |
|------------------|----|----------|----------|
| 07:00 - 08:00 AM | 31 | Elevated | 13-24 nM |
| 11:00 - Noon     | 11 | Elevated | 5-10 nM  |
| 04:00 - 05:00 PM | 5  | Normal   | 3-8 nM   |
| 11:00 - Midnight | 9  | Elevated | 1-4 nM   |

|                  |    |       |
|------------------|----|-------|
| Cortisol Burden: | 56 | 23-42 |
|------------------|----|-------|

**Figure -2.**

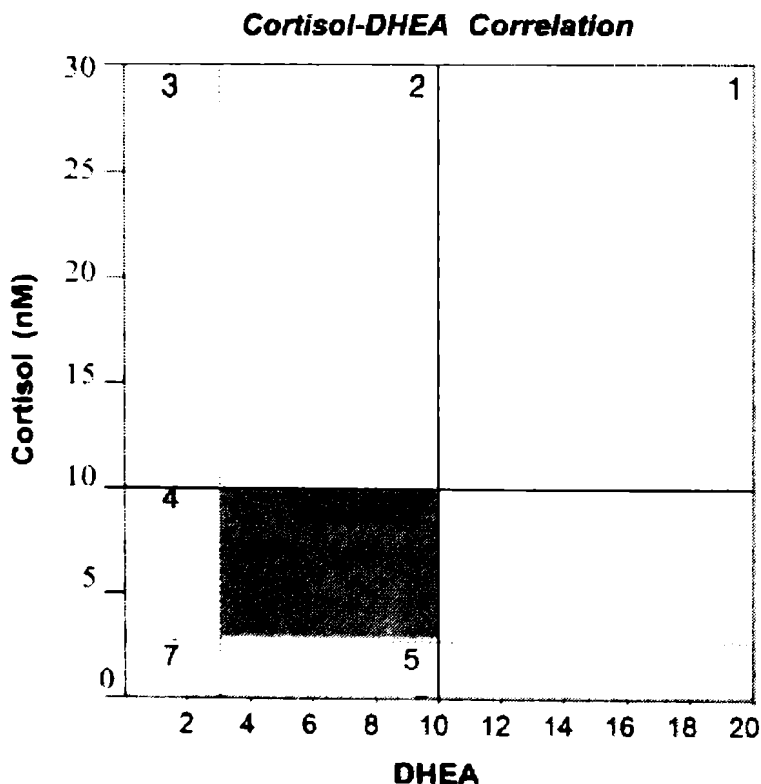
Do you see the term “cortisol burden”? (See Figure -2). This is the combined amounts of all 4 of the cortisol samples taken through the day. This person's value of “56” is higher than the

normal range (23 - 42).

This does not necessarily mean that this person will have lots of energy—many people with high cortisol describe symptoms of fatigue, anxiety, and insomnia (similar to low cortisol symptoms). High cortisol can impair the conversion of T4 (the “storage form” of thyroid hormone) into T3 (the “active form” of thyroid hormone).

DiagnosTech labs have a grid showing numbers 1 - 7. This person's result is in the “normal” zone despite the high cortisol in the morning and night because this grid takes the readings from the noon and afternoon points of the day, and averages them to get a single value to put on this chart.

Do you see how the average of the noon and 4 pm cortisol amounts would place the black square in the “normal zone” above? It is a bit higher than normal, but still fits within the range.



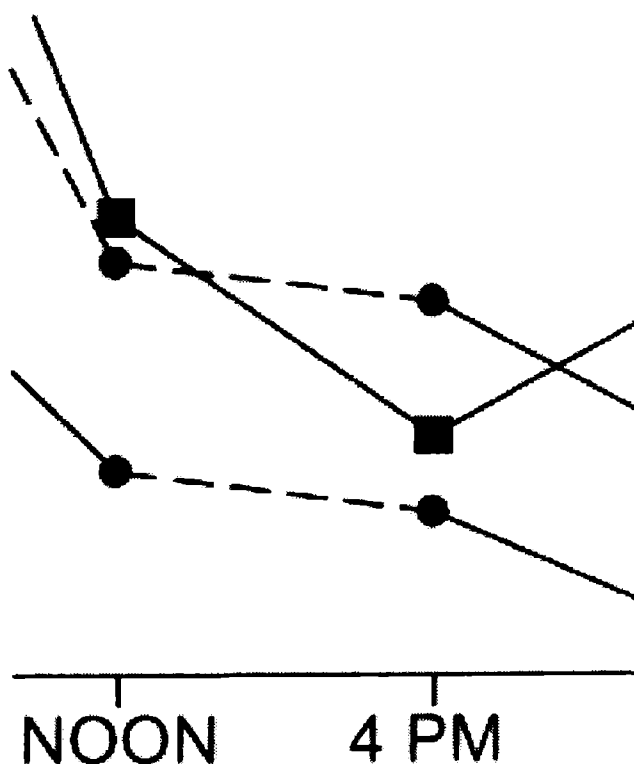
**Figure -3.**

That is the most “stable” part of the day in terms of the



cortisol rhythm, and that is also when they gather the DHEA reading. The lab's explanation below says the correlation of cortisol to DHEA was in the (normal) reference zone, but there could still be high or low cortisol at specific points in the day.

Looking at the big picture, this person has high cortisol, and the rhythm is not normal.



**Figure -4.**

DHEA Dehydroepiandrosterone  
Pooled Value 4 Normal Adults (M/F) 3-10 ng/ml

Figure 3 shows your cortisol-DHEA correlation was in Reference zone  
individuals in this zone usually display a balance in the average values of cortisol to DHEA for the day

Falling in the reference zone does not preclude the occurrence of high or low cortisol at any specific time on their circadian

**Figure -5.**

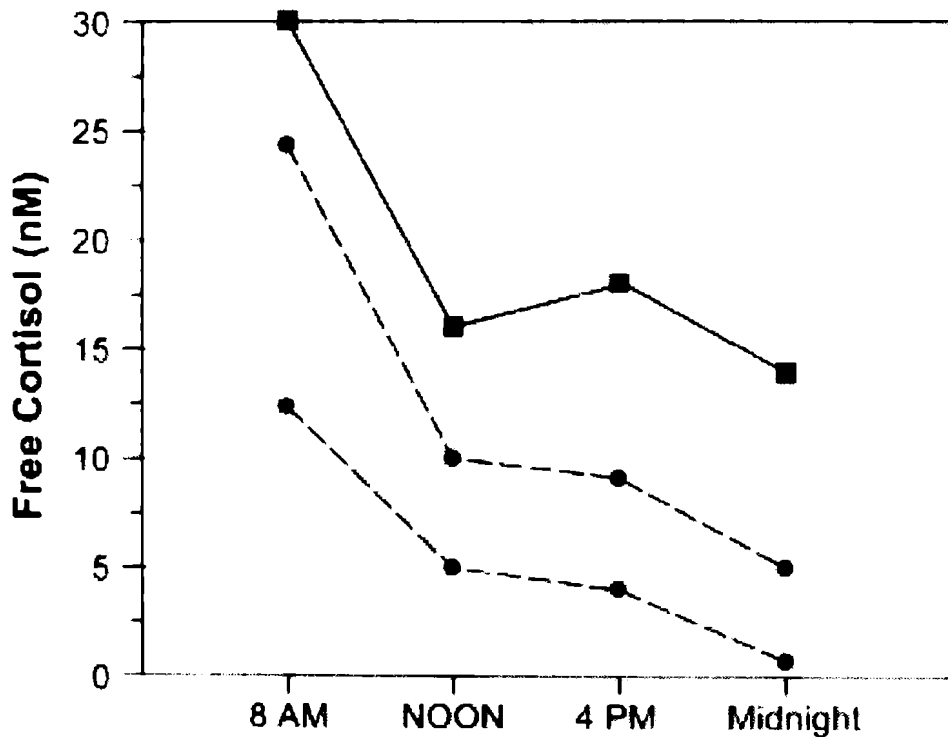
OK, let's look at another example where the person has high cortisol.

The combined cortisol throughout the day is 87, compared

to a normal range of (23 - 42). This person's cortisol is DOUBLE the highest range of normal.

This person's DHEA is a bit higher than center of normal, and if you look at the grid below, you will see that the black square is to the right of center, but still within the normal zone.

### ***Circadian Cortisol Profile***



***Figure -6.***

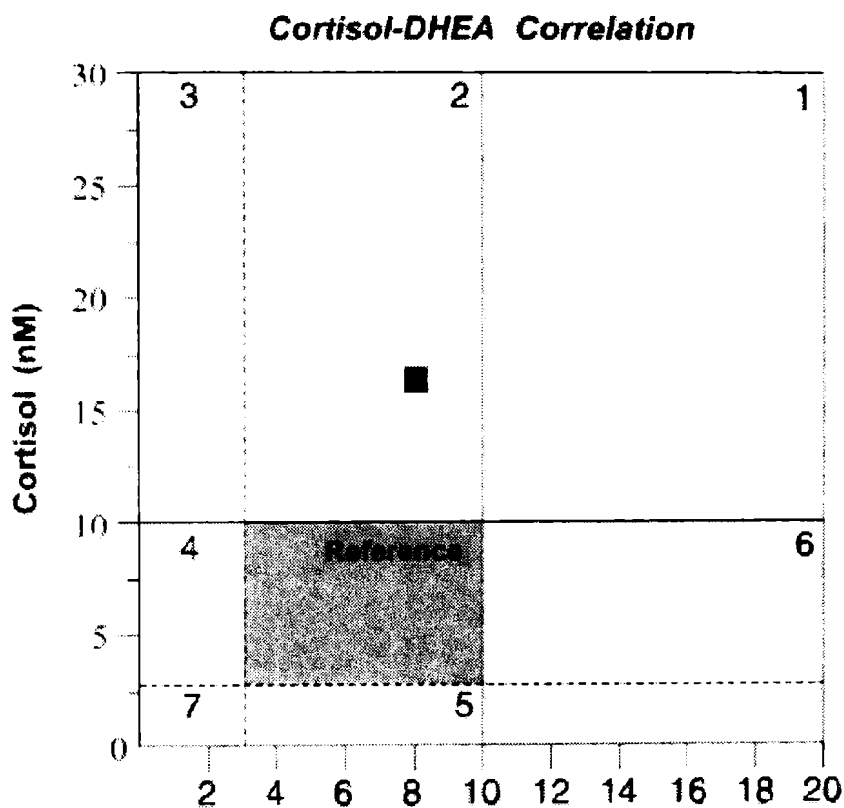
#### **Free Cortisol Rhythm**

|                  |    |          |          |
|------------------|----|----------|----------|
| 07:00 - 08:00 AM | 39 | Elevated | 13-24 nM |
| 11:00 - Noon     | 16 | Elevated | 5-10 nM  |
| 04:00 - 05:00 PM | 18 | Elevated | 3-8 nM   |
| 11:00 - Midnight | 14 | Elevated | 1-4 nM   |

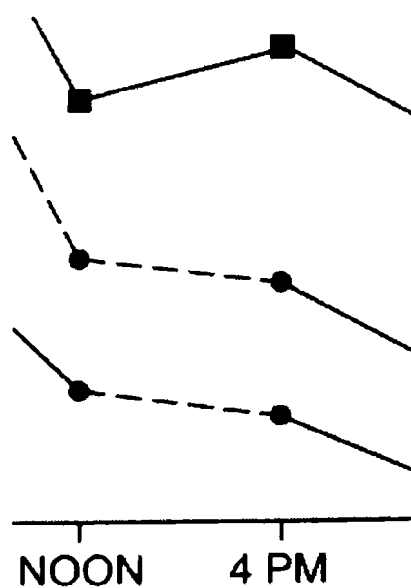
|                        |    |        |                    |
|------------------------|----|--------|--------------------|
| Cortisol Burden:       | 87 |        | 23-42              |
| DHEA                   | 8  | Normal | Adults (M/F): 3-10 |
| Dehydroepiandrosterone |    |        |                    |

***Figure -7.***

If you were to average the noon and 4 pm cortisol amounts, you can see how the black square ends up higher than normal.



*Figure -8.*



*Figure -9.*

DiagnosTech has determined that the Cortisol to DHEA correlation is “Zone 2”, that is where the black square is placed. If you look at the explanation below, this means “Adapted with DHEA slump”. What does this mean?

If this person’s DHEA lab result was higher, the little black square would be in “Zone 1”. The explanation for Zone 1 “adapted to stress” means that the body is responding to the challenge. Healthy adrenals react to stress by putting out more cortisol, and the DHEA levels will increase in a similar way. In the example above, “Adapted with DHEA slump”, the person’s cortisol has adapted to the stress but the DHEA is not maintaining the higher output. If the DHEA was below normal, the black square would be in Zone 3.

The theory of the adrenals reaction to stress is explained on a web site by Dr. Lam<sup>30</sup> beginning with the “Alarm” phase—increased cortisol as a reaction to stress.

Dr. Lam’s site has a good explanation of how the adrenal hormones Cortisol and DHEA both come from Pregnenolone. During times of stress, the body requires more cortisol, and if this demand continues, more of the Pregnenolone will go toward cortisol—and less DHEA will be made.

### **KEY: CORTISOL-DHEA CORRELATION**

- 1. Adapted to stress.**
- 2. Adapted with DHEA slump.**
- 3. Maladapted Phase I.**
- 4. Maladapted Phase II.**
- 5. Non-adapted, Low Reserves.**
- 6. High DHEA.**
- 7. Adrenal Fatigue.**

### ***Figure -10.***

Now, please look at the DiagnosTech grid of “7 Zones” once more. Can you visualize how the person is making plenty of DHEA at 1—then drops down at 2 and 3? The person still has high cortisol, but the DHEA levels are dropping.

As the adrenal fatigue progresses, Dr. Lam’s site refers to the “Resistance” phase. He says “While the morning, noon, or

---

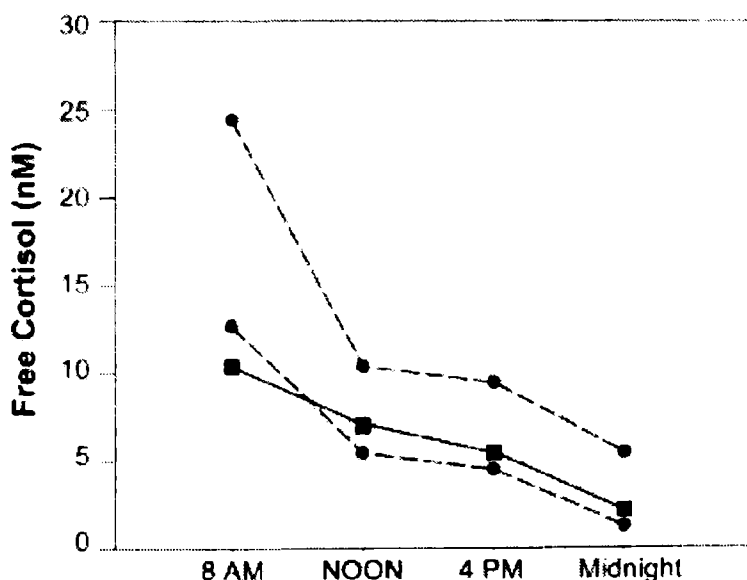
<sup>30</sup> [www.drlam.com/A3R\\_brief\\_in\\_doc\\_format/adrenal\\_fatigue.cfm](http://www.drlam.com/A3R_brief_in_doc_format/adrenal_fatigue.cfm)

afternoon cortisol levels are often low, the nighttime cortisol level is usually normal." This DiagnosTech lab is an example where the morning cortisol has dropped down.

We really don't know if this person's adrenal fatigue was caused by stress, but it would fit Dr. Lam's explanation "With chronic or severe stress, the adrenals eventually are unable to keep up with the body's demand for cortisol. As such, the cortisol output will start to decline from a high back to a normal level, while the ACTH remains high. With protracted ACTH and adrenal fatigue, less cortisol is produced due to the adrenals becoming exhausted."

ACTH is an abbreviation for Adrenocorticotrophic hormone, produced by the pituitary gland, which stimulates the adrenal glands to produce cortisol. An early morning blood test for

#### ***Circadian Cortisol Profile***



***Figure -11.***

ACTH levels would provide a more complete picture for this person. If the ACTH is high, yet cortisol is low, the problem is with the adrenals. But if the lab revealed low ACTH, the person could have some degree of hypo--pituitary.

As you read the complete Dr. Lam article, he explains that in this phase of adrenal fatigue the DHEA levels continue to

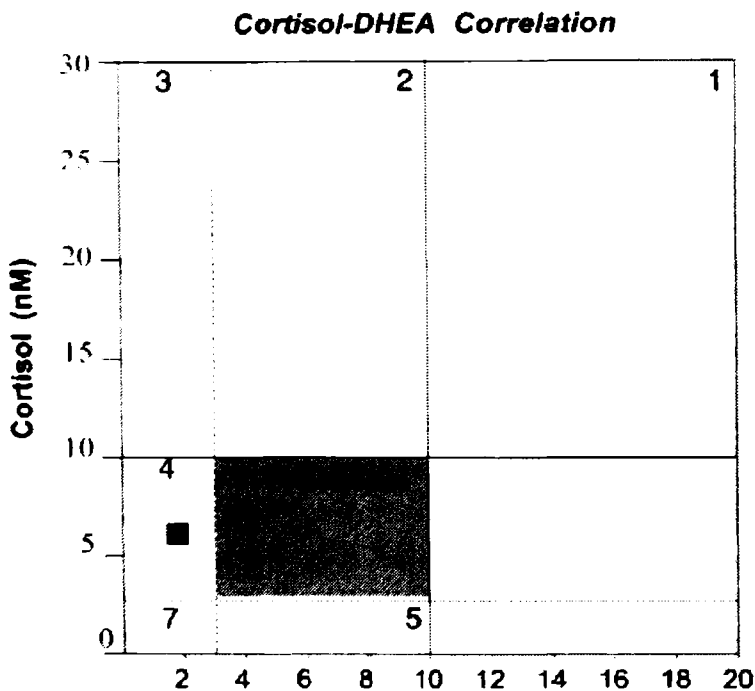
drop, and this person would be an example of that. The lab result of "2" falls out of the normal DHEA range (3 - 10). Do you see how that has placed the little black square over to the left side of normal?

#### Free Cortisol Rhythm

|                  |    |           |          |
|------------------|----|-----------|----------|
| 07:00 - 08:00 AM | 10 | Depressed | 13-24 nM |
| 11:00 - Noon     | 7  | Normal    | 5-10 nM  |
| 04:00 - 05:00 PM | 4  | Normal    | 3-8 nM   |
| 11:00 - Midnight | 2  | Normal    | 1-4 nM   |

|                        |    |                |                    |
|------------------------|----|----------------|--------------------|
| Cortisol Burden:       | 23 |                | 23-42              |
| DHEA                   | 2  | Depressed DHEA | Adults (M/F): 3-10 |
| Dehydroepiandrosterone |    |                |                    |

*Figure -12.*



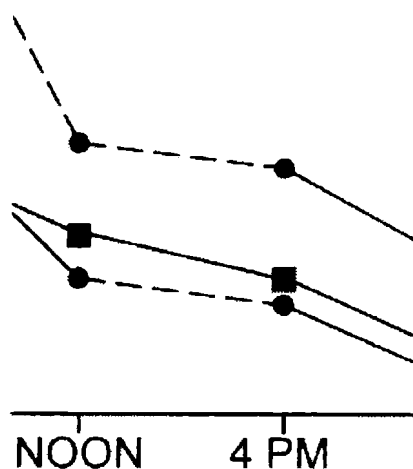
*Figure -13.*

As the person's DHEA gets lower, the black square moves

to the left.

Why is this person's cortisol in the normal range? Remember, DiagnosTech uses the average of the mid-day readings to determine where the black square will go.

This lab happens to be from a relative who had symptoms of adrenal fatigue, especially waking up tired, craving coffee and sweets, and feeling best only after 6 pm<sup>31</sup>.



*Figure -14.*

At first glance, his labs don't look that bad. His cortisol burden is 23 compared to range (23 - 42). But the symptoms are important in deciding what to do. And remember what Dr. Lam says: "adrenal hormones are low in the case of adrenal fatigue, but still within the "normal" range and not low enough to warrant the diagnosis of Addison's disease by regular blood tests. In fact, your adrenal hormones can be half of the optimum level and still be labeled "normal". Such "normal" level of adrenal hormones does not mean that the patient is free from adrenal fatigue. Conventional doctors are not taught the significance of sub-clinical adrenal fatigue. They are misguided by blood tests which are not sensitive enough to detect sub-clinical adrena. As a result, patients tested for adrenal functions are told they are "normal" but in reality,

<sup>31</sup> <http://adrenalfatigue.org/doi.php>

their adrenal glands are performing sub-optimally, with clear signs and symptoms as the body cries out for help and attention.

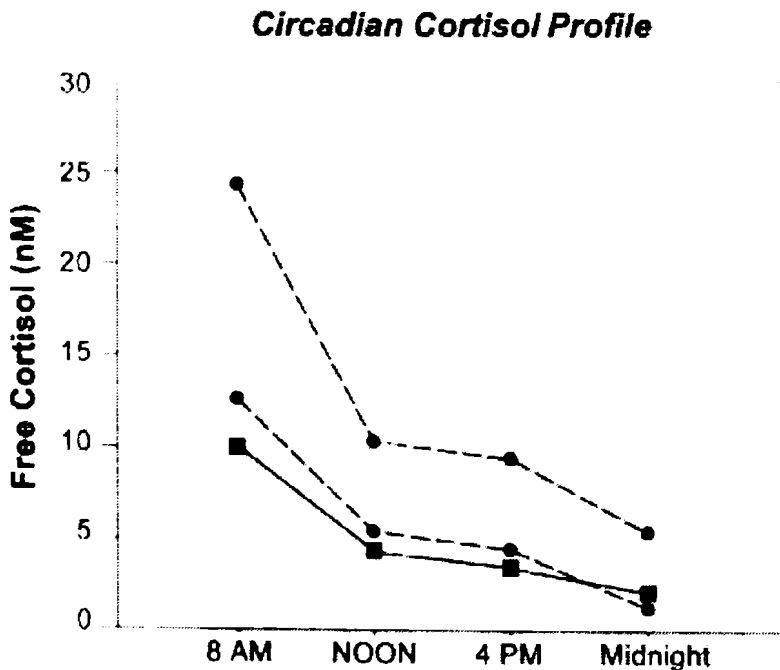
“Adrenal fatigue afflicts more people than Addison’s disease. It is not recognized and has become an epidemic of massive proportion.”

My relative evaluated his symptoms and the fact that he also had very low thyroid hormones. He did not want to begin thyroid supplementation without supporting the adrenals first.

He followed the dosing protocol advised by Dr. Peatfield for Hydrocortisone (Cortef). He noticed improvement right away and is doing well. He was able to introduce a prescription for desiccated thyroid and did even better, with his temperatures finally coming up to normal.



Here’s an example with less cortisol:



***Figure -15.***

DiagnosTech will focus on the average of the Noon and



4 pm readings to determine where the black square goes. The DHEA is within normal range. This person is on the edge of zone 5, but the lab does consider it a zone 5 as explained below.

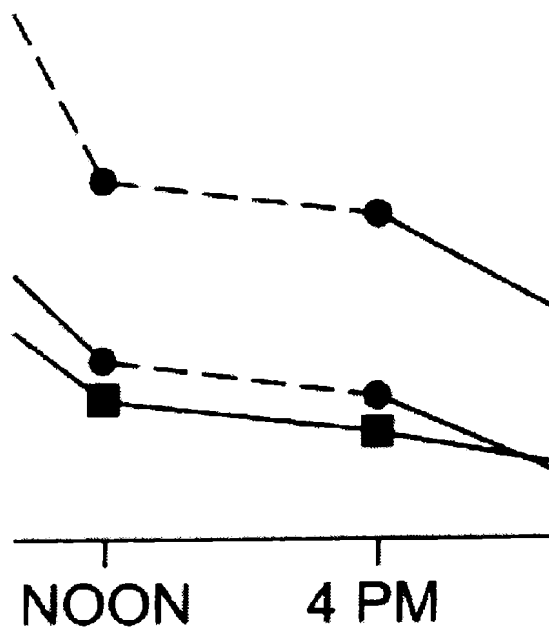
I think most of us could agree that this person has a low cortisol output. The cortisol burden (combined values) is 18 (23 -42 normal range). The lab mentions that this condition is usually the outcome of stress—but really there is no way to say exactly what caused this person's condition without doing additional lab tests.

### Free Cortisol Rhythm

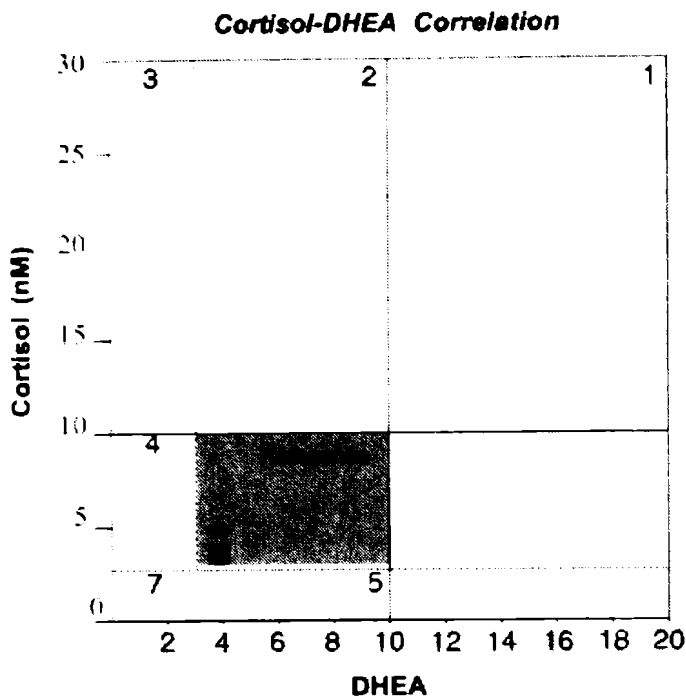
|                  |    |           |          |
|------------------|----|-----------|----------|
| 07:00 - 08:00 AM | 10 | Depressed | 13-24 nM |
| 11:00 - Noon     | 4  | Depressed | 5-10 nM  |
| 04:00 - 05:00 PM | 2  | Depressed | 3-8 nM   |
| 11:00 - Midnight | 2  | Normal    | 1-4 nM   |

Cortisol Burden: 18 23-42

*Figure -16.*



*Figure -17.*

**Figure -18.**

DHEA    Dehydroepiandrosterone  
 Pooled Value    4    Normal    Adults (M/F): 3-10 ng/ml

Figure 3 shows your cortisol-DHEA correlation was in:

**Zone 5 - Non-adapted, Low Reserves**

This zone represents a suboptimal cortisol output reflecting an adrenal decline or a depleted reserve. The reduced demand for pregnenolone precursor in the cortisol pathway may allow a normal DHEA production. This condition is usually the outcome of chronic and protracted exposure to stressors.

**Figure -19.**

Here's an example with even less cortisol:

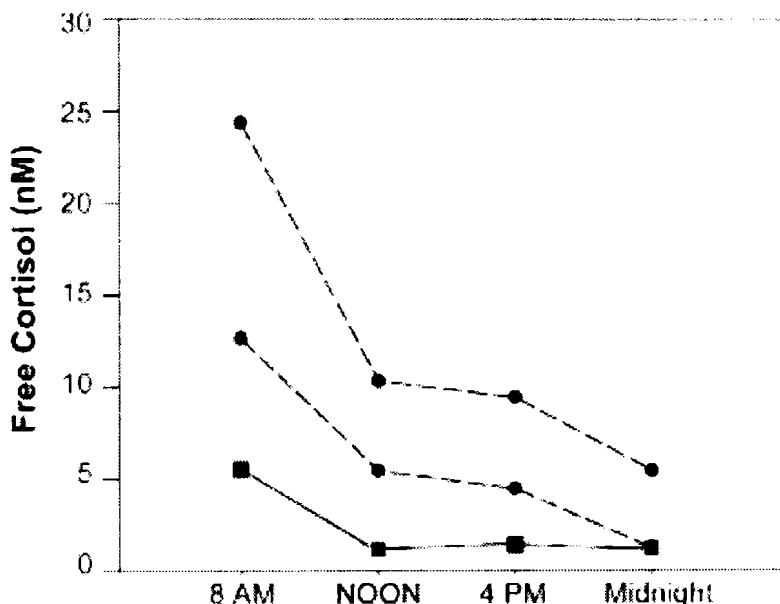
This person had immeasurable cortisol three of the points in the day, with a total combined cortisol burden of only 8 (range 23 - 42).

The average of the Noon and 4 pm readings would put the black square as low as it could go, because both readings were immeasurable. But because the DHEA was within the normal range, the black square goes to zone 5.

Do you see the explanation for Zone 5—"Non-adapted,

Low Reserves"? They are assuming this person was subjected to stress. If they had "adapted" to the stress, they would be putting out high levels of cortisol. The cortisol is low, so they are "Non-adapted".

### ***Circadian Cortisol Profile***



***Figure -20.***

### **Free Cortisol Rhythm**

|                        |    |           |                    |
|------------------------|----|-----------|--------------------|
| 07:00 - 08:00 AM       | 5  | Depressed | 13-24 nM           |
| 11:00 - Noon           | <1 | Depressed | 5-10 nM            |
| 04:00 - 05:00 PM       | <1 | Depressed | 3-8 nM             |
| 11:00 - Midnight       | <1 | Depressed | 1-4 nM             |
| Cortisol Burden:       | 8  |           | 23-42              |
| DHEA                   | 4  | Normal    | Adults (M/F): 3-10 |
| Dehydroepiandrosterone |    |           |                    |

***Figure -21.***

The "low reserves" means that if the person gets sick, or other increased stress, they lack the "reserves" to put out the increased cortisol that the body requires. Dr. Jefferies talks about this in his book *Safe uses of Cortisol*.



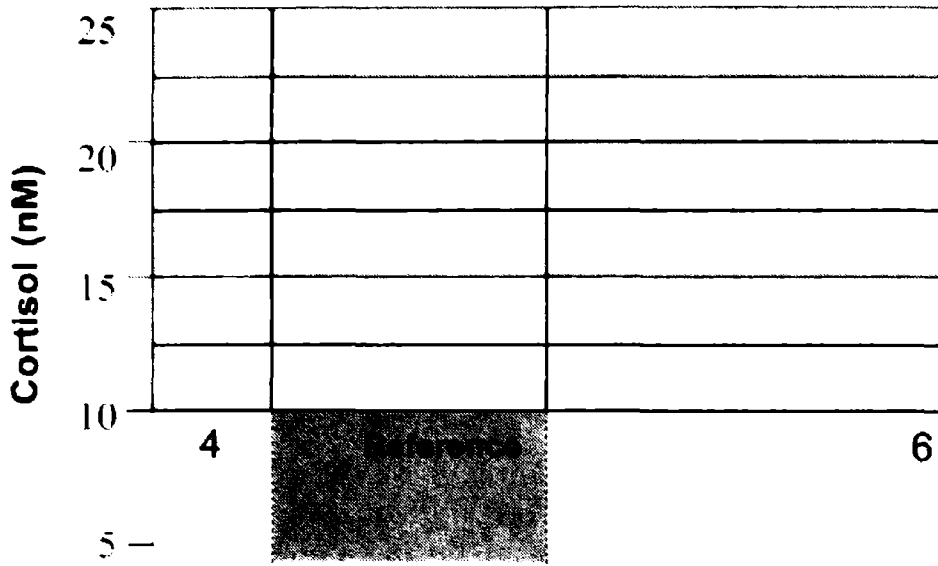


Figure -22.

**KEY: CORTISOL-DHEA CORRELATION**

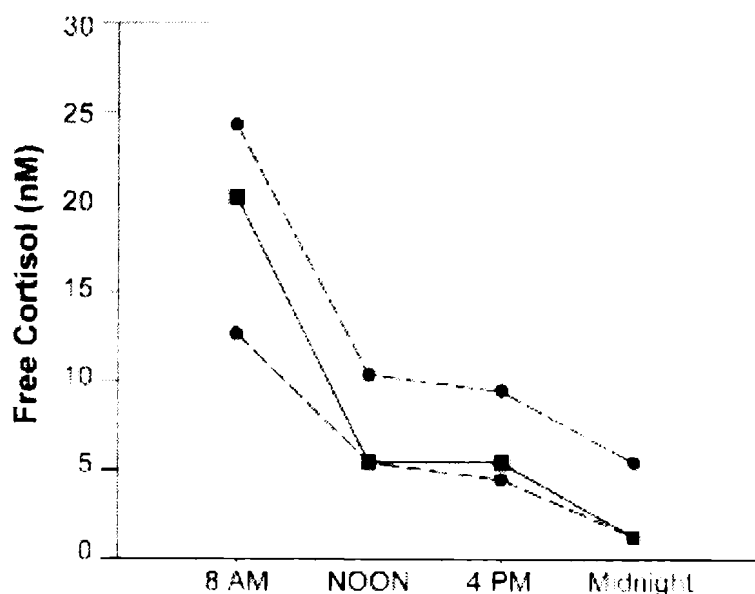
1. Adapted to stress.
2. Adapted with DHEA slump.
3. Maladapted Phase I.
4. Maladapted Phase II.
5. Non-adapted, Low Reserves.
6. High DHEA.
7. Adrenal Fatigue.

Figure -23.

You might think that a Zone 6 is worse than a Zone 5, but not necessarily.

This person has almost a perfect centerline normal "cortisol burden" of 30 (23 - 42) but the DHEA is way higher than normal.

Here you can see how the DHEA has shoved the black square far over to the right, and if the cortisol amounts from the average of Noon and 4 pm fall within the normal range, it is a Zone 6.

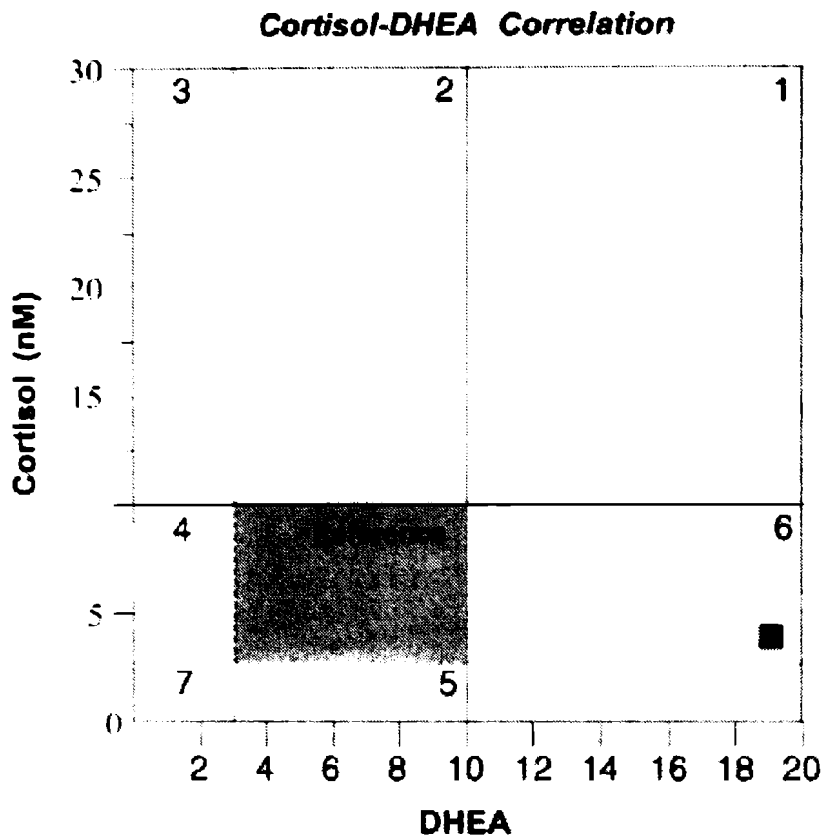
**Circadian Cortisol Profile****Figure -24.****Free Cortisol Rhythm**

|                        |    |               |                    |
|------------------------|----|---------------|--------------------|
| 07:00 - 08:00 AM       | 20 | Normal        | 13-24 nM           |
| 11:00 - Noon           | 5  | Normal        | 5-10 nM            |
| 04:00 - 05:00 PM       | 4  | Normal        | 3-8 nM             |
| 11:00 - Midnight       | 1  | Normal        | 1-4 nM             |
| Cortisol Burden:       | 30 |               | 23-42              |
| DHEA                   | 19 | Elevated DHEA | Adults (M/F): 3-10 |
| Dehydroepiandrosterone |    |               |                    |

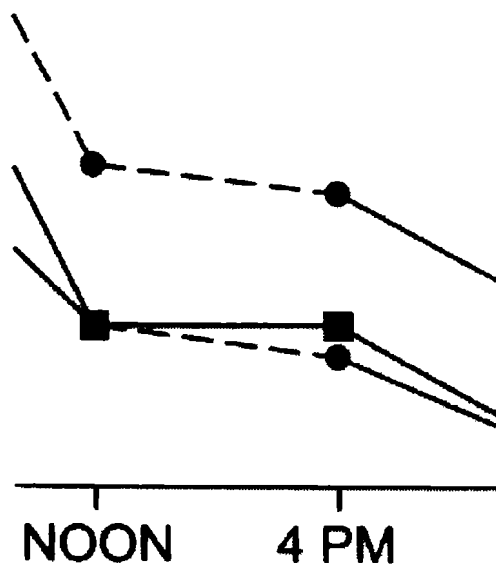
**Figure -25.**

There are examples of labs with the black square in Zone 6 that had lower cortisol, and I have seen some with cortisol so low that it lands in the area “below 6” that has no Zone number.

High DHEA is a problem. Dr. Peatfield says “High levels of cortisol and DHEA show adrenals under stress. Sometimes the cortisol pathway starts to fade as exhaustion sets in, with DHEA still reasonably present. Less commonly, there may be a really high DHEA—a response to ACTH stimulation but with the cortisol pathways responding poorly. Erratic levels in both are evidence of strain and uneven response.”



**Figure -26.**

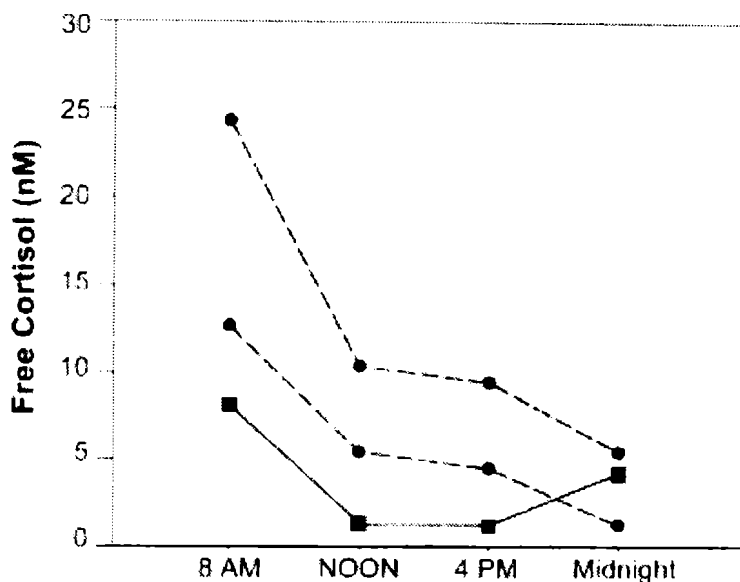


**Figure -27.**

**\* \* \***

Let's look at another example This person has low cortisol, especially in the mid-day, when DiagnosTech focuses on where to put the little black square.

***Circadian Cortisol Profile***



***Figure -28.***

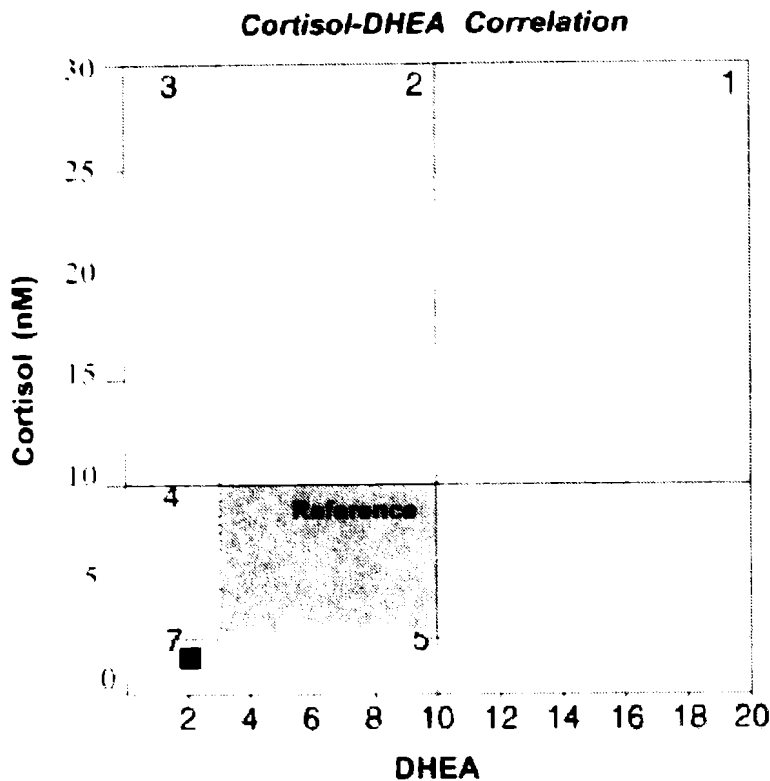
**Free Cortisol Rhythm**

|                  |    |           |          |
|------------------|----|-----------|----------|
| 07:00 - 08:00 AM | 8  | Depressed | 13-24 nM |
| 11:00 - Noon     | 1  | Depressed | 5-10 nM  |
| 04:00 - 05:00 PM | 1  | Depressed | 3-8 nM   |
| 11:00 - Midnight | 3  | Normal    | 1-4 nM   |
| Cortisol Burden: | 13 |           | 23-42    |

***Figure -29.***

Because the DHEA was below normal, the black square ends up in Zone 7.

OK, so the lab is explaining low Cortisol and low DHEA. They say that taking steroids could cause a lab result like this and the instructions that come with the DiagnosTech kit warn that the use of Hydrocortisone, Isocort, etc. will affect the results. That is why you want to do these tests BEFORE treatment.

**Figure -30.**

DHEA    Dehydroepiandrosterone  
 Pooled Value    2    Depressed DHEA    Adults (M/F): 3-10 ng/ml

Figure 3 shows your cortisol-DHEA correlation was in:

**Zone 7 - Adrenal Fatigue**

This zone represents a fatigue or suppression of the adrenals with overt deficits in either or both cortisol and DHEA production. Individuals with suppressed hypothalamic pituitary axis due to exogenous steroid overuse may also show results that fall in zone 7.

**Figure -31.**

This person had very low DHEA. People with hypopituitary often have low DHEA on lab tests, so it isn't always a simple matter of "stress" or fatigued adrenals.



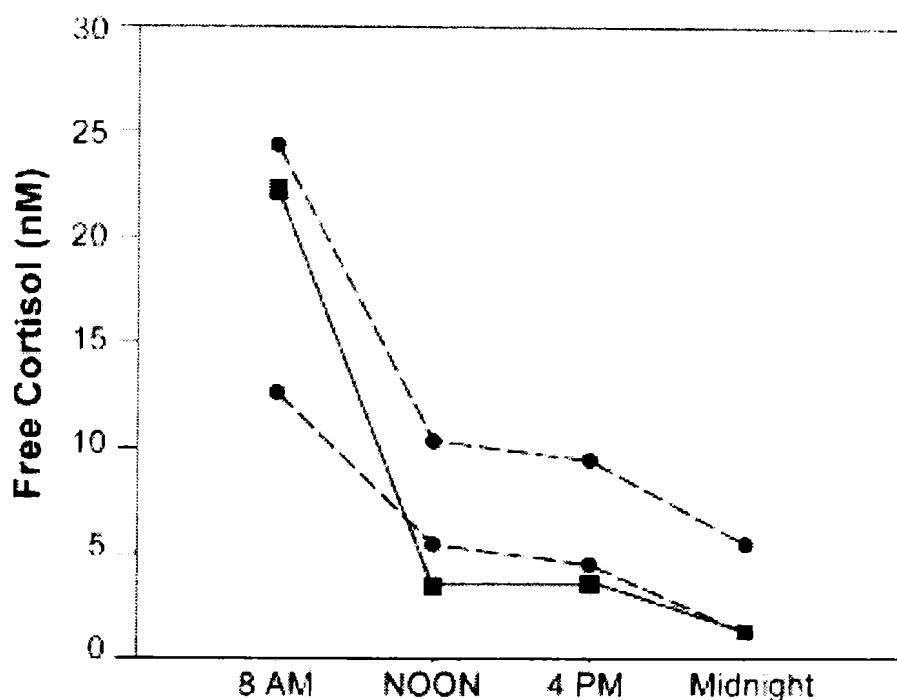
Let's look at another "Zone 7" example. Zone 7's is not always "flat-lining".



Because of the high morning cortisol, this person's total cortisol output for the day "28" is within the normal range (23 - 42). But the DHEA is below normal.

Why did the black square end up in "Zone 7"? Remember, DiagnosTech uses the mid day average to place the little black square.

### ***Circadian Cortisol Profile***



***Figure -32.***

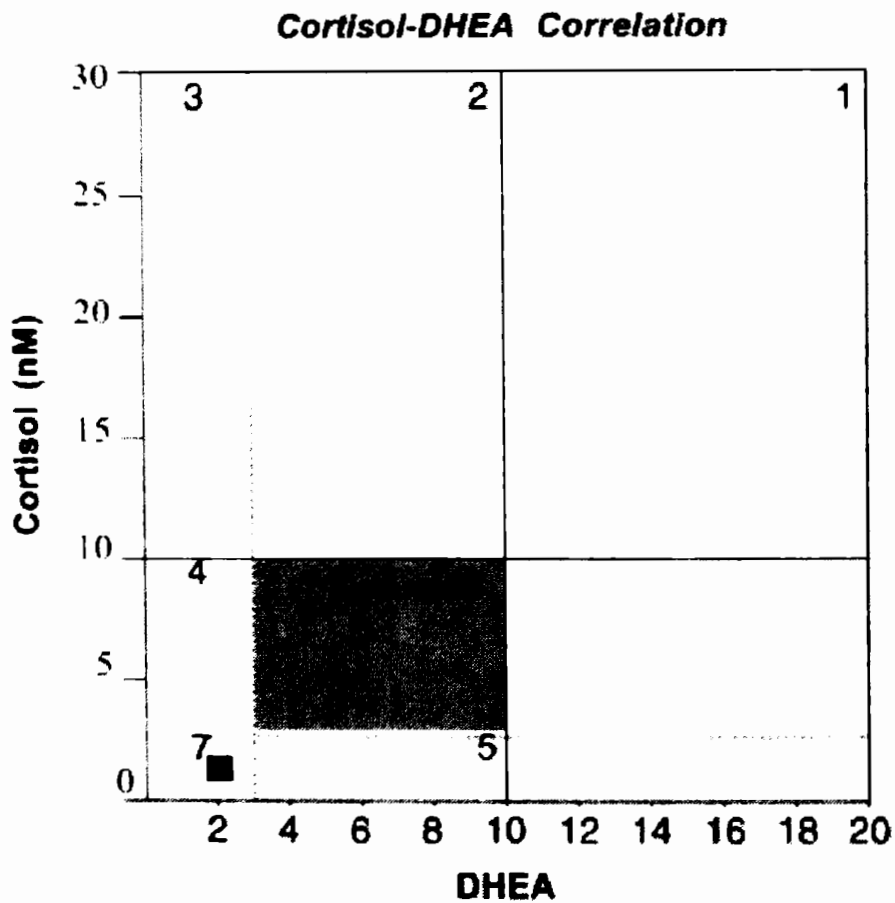
**\* \* \***

This person has the low morning cortisol, with normal levels later in the day. Dr. Lam describes this on his site, and that it indicates adrenal fatigue.

The average of the Noon and 4 pm cortisol levels fit within the normal range. The DHEA fit within the normal range, so this person's "Zone" is normal. But the cortisol burden of 19 falls below the reference range (23 - 42). Do you see how the cortisol rhythm is "flattened" compared to normal? This person suffered from fatigue.

**Free Cortisol Rhythm**

|                        |    |                |                    |
|------------------------|----|----------------|--------------------|
| 07:00 - 08:00 AM       | 22 | Normal         | 13-24 nM           |
| 11:00 - Noon           | 3  | Depressed      | 5-10 nM            |
| 04:00 - 05:00 PM       | 2  | Depressed      | 3-8 nM             |
| 11:00 - Midnight       | 1  | Normal         | 1-4 nM             |
| Cortisol Burden:       | 28 |                | 23-42              |
| DHEA                   | 2  | Depressed DHEA | Adults (M/F): 3-10 |
| Dehydroepiandrosterone |    |                |                    |

*Figure -33.**Figure -34.*

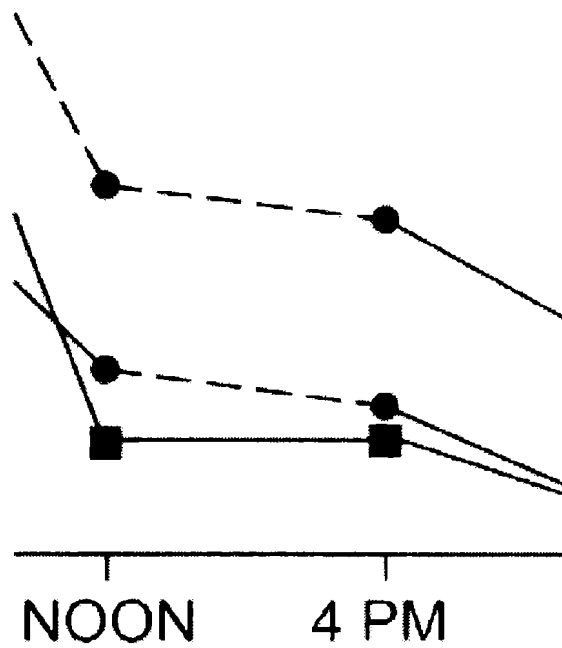


Figure -35.

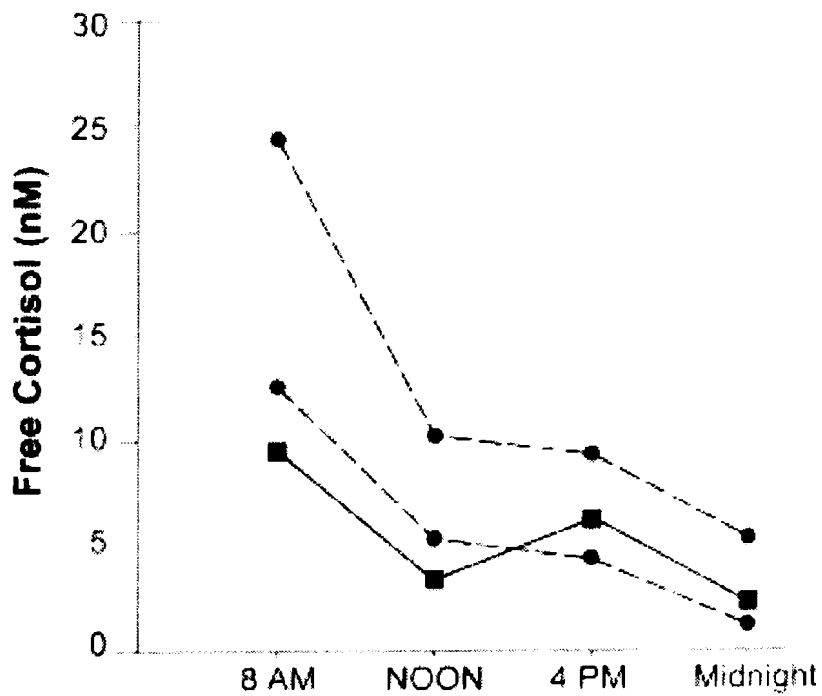
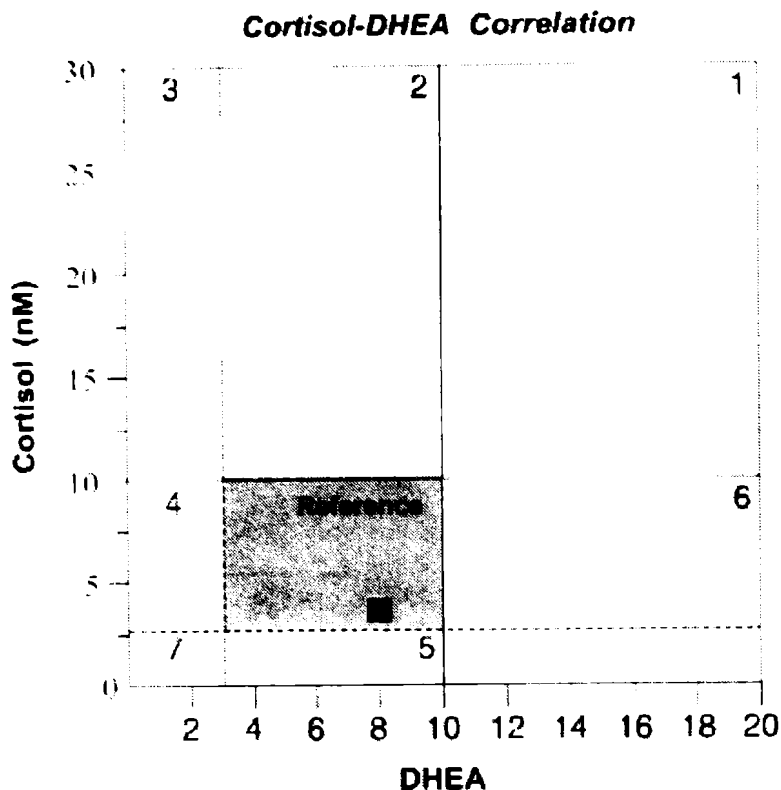
**Circadian Cortisol Profile**

Figure -36.

\* \* \*

*Figure -37.***Free Cortisol Rhythm**

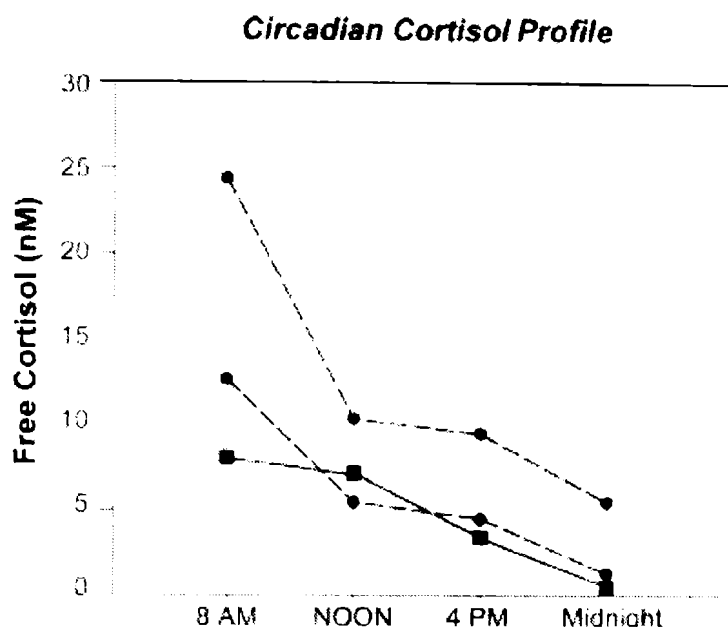
|                               |           |                  |                           |
|-------------------------------|-----------|------------------|---------------------------|
| <b>07:00 - 08:00 AM</b>       | <b>9</b>  | <b>Depressed</b> | <b>13-24 nM</b>           |
| <b>11:00 - Noon</b>           | <b>3</b>  | <b>Depressed</b> | <b>5-10 nM</b>            |
| <b>04:00 - 05:00 PM</b>       | <b>5</b>  | <b>Normal</b>    | <b>3-8 nM</b>             |
| <b>11:00 - Midnight</b>       | <b>1</b>  | <b>Normal</b>    | <b>1-4 nM</b>             |
| <b>Cortisol Burden:</b>       | <b>19</b> |                  | <b>23-42</b>              |
| <b>DHEA</b>                   | <b>8</b>  | <b>Normal</b>    | <b>Adults (M/F): 3-10</b> |
| <b>Dehydroepiandrosterone</b> |           |                  |                           |

*Figure -38.*

Here's another example of a person who suspected adrenal problems due to their symptoms. Their lab came back like this:

Again we see that the average of the Noon and 4 pm Cortisol amounts are within normal range, and the DHEA is OK.

But

**Figure -39.**

Do you see where it says the final cortisol reading is < (less than) 0.3? If you search through Diagnostech.com and read through the technical articles, you will find this comment:

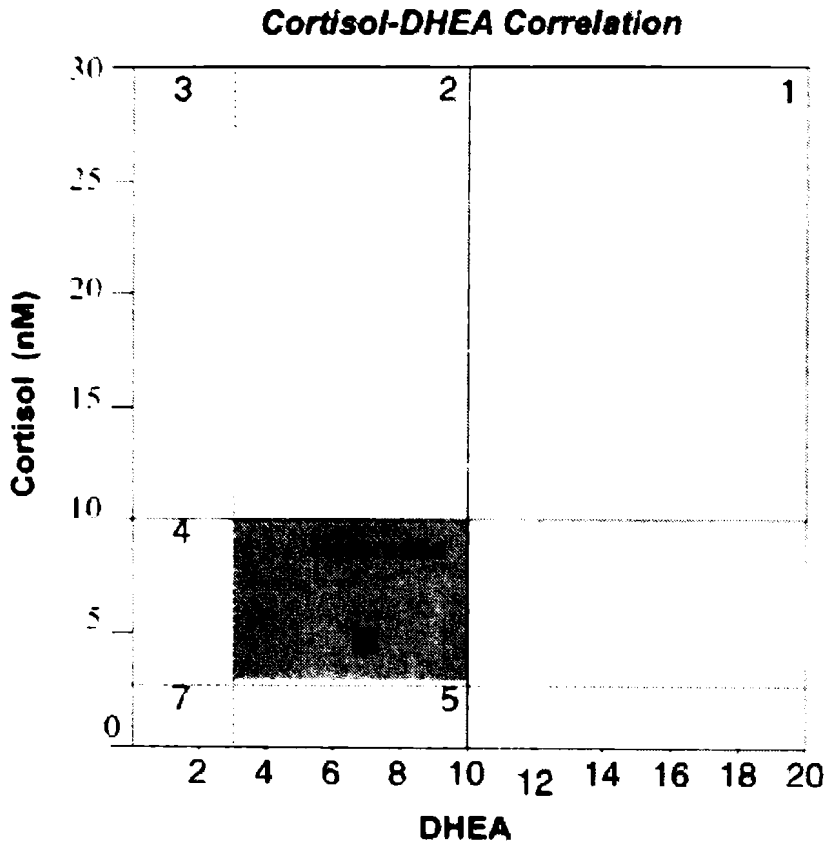
Addison's Disease: < 1nM (any time)

The link to that quote cannot be done "directly" due to the way their site is set up; you have to click on "Tests & Panels" then "Conceptual Framework" then "Test Specifications". The same comment can be found on pg 36 of the 43 page Adrenal Stress Index manual provided to doctors, but I would not give anyone the label of "Addison's" until they had further testing done.

Nonetheless, it is noteworthy when there is immeasurable cortisol at any point of the day, as it certainly indicates that the person has low cortisol. And as the doctors have been quoted—the person lacks "adrenal reserve". They aren't coping with current cortisol needs, so how can they produce the extra cortisol needed during times of illness, or other stress such as bad news, car wreck, etc?

It would be a mistake to simply glance at this person's reference zone and say it was a "Normal" result. You have to look at the cortisol rhythm, the total amount of cortisol they

are making, and the symptoms of the patient that may indicate adrenal fatigue (including blood pressure test upon standing, etc. (See Chapter 5.)



*Figure -40.*

**Free Cortisol Rhythm**

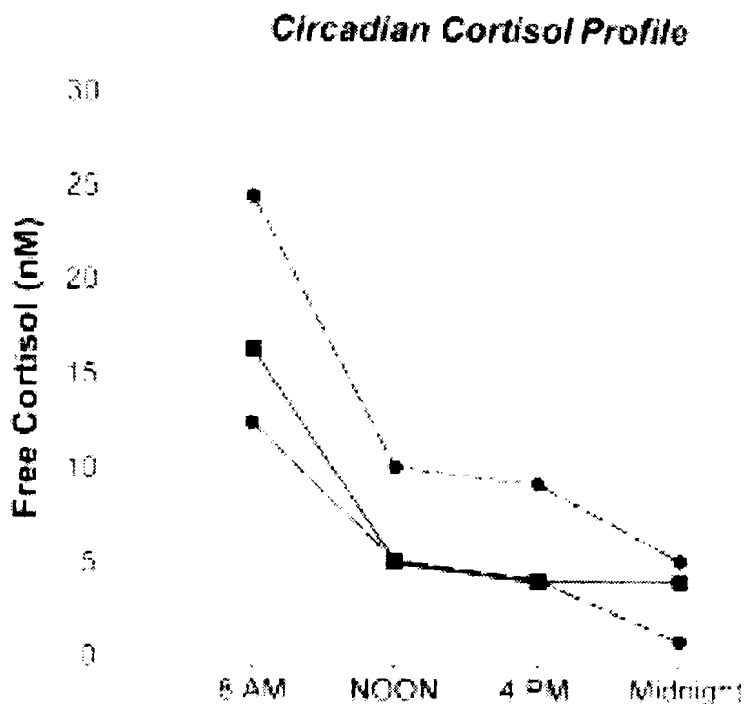
|                               |                |                  |                           |
|-------------------------------|----------------|------------------|---------------------------|
| <b>07:00 - 08:00 AM</b>       | <b>8</b>       | <b>Depressed</b> | <b>13-24 nM</b>           |
| <b>11:00 - Noon</b>           | <b>7</b>       | <b>Normal</b>    | <b>5-10 nM</b>            |
| <b>04:00 - 05:00 PM</b>       | <b>2</b>       | <b>Depressed</b> | <b>3-8 nM</b>             |
| <b>11:00 - Midnight</b>       | <b>&lt;0.3</b> |                  | <b>1-4 nM</b>             |
| <b>Cortisol Burden:</b>       | <b>17</b>      |                  | <b>23-42</b>              |
| <b>DHEA</b>                   | <b>7</b>       | <b>Normal</b>    | <b>Adults (M/F): 3-10</b> |
| <b>Dehydroepiandrosterone</b> |                |                  |                           |

*Figure -41.*

**\* \* \***

This lab result is kind of borderline.

As you can see, their cortisol burden is at the low end of  
 no)



#### Free Cortisol Rhythm

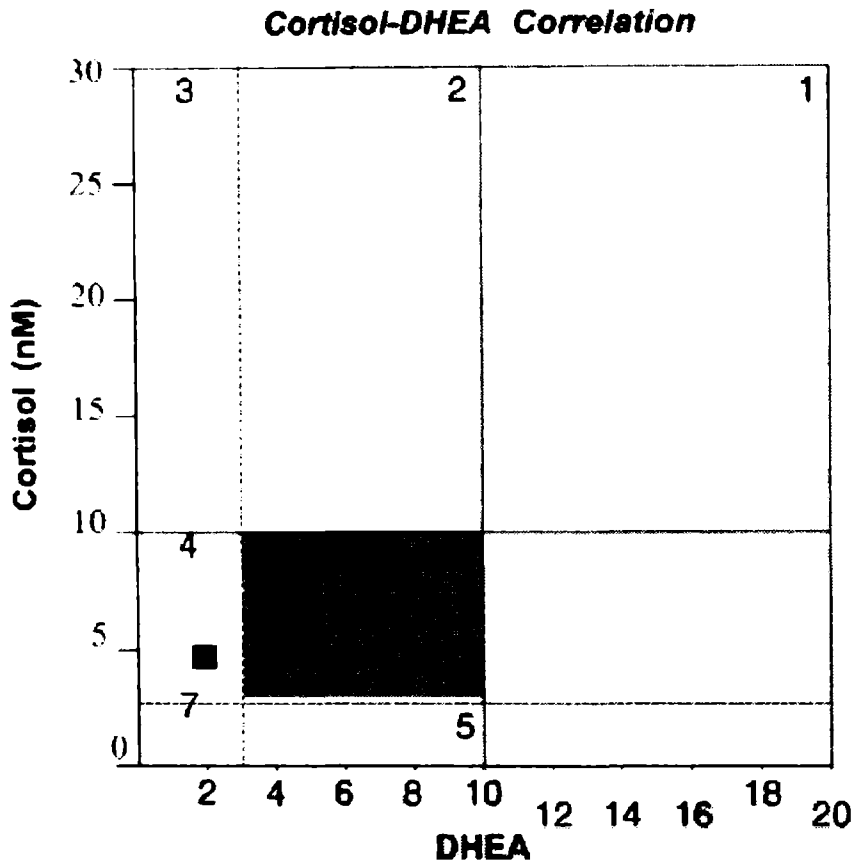
|                        |    |                |                    |
|------------------------|----|----------------|--------------------|
| 07:00 - 08:00 AM       | 16 | Normal         | 13-24 nM           |
| 11:00 - Noon           | 5  | Normal         | 5-10 nM            |
| 04:00 - 05:00 PM       | 3  | Normal         | 3-8 nM             |
| 11:00 - Midnight       | 3  | Normal         | 1-4 nM             |
| Cortisol Burden:       | 27 |                | 23-42              |
| DHEA                   | 2  | Depressed DHEA | Adults (M/F): 3-10 |
| Dehydroepiandrosterone |    |                |                    |

**Figure -43.**

This person submitted a lab sample because she suspected adrenal fatigue due to her symptoms. This is an example where the DiagnosTechs Zone system is helpful. The mid-day

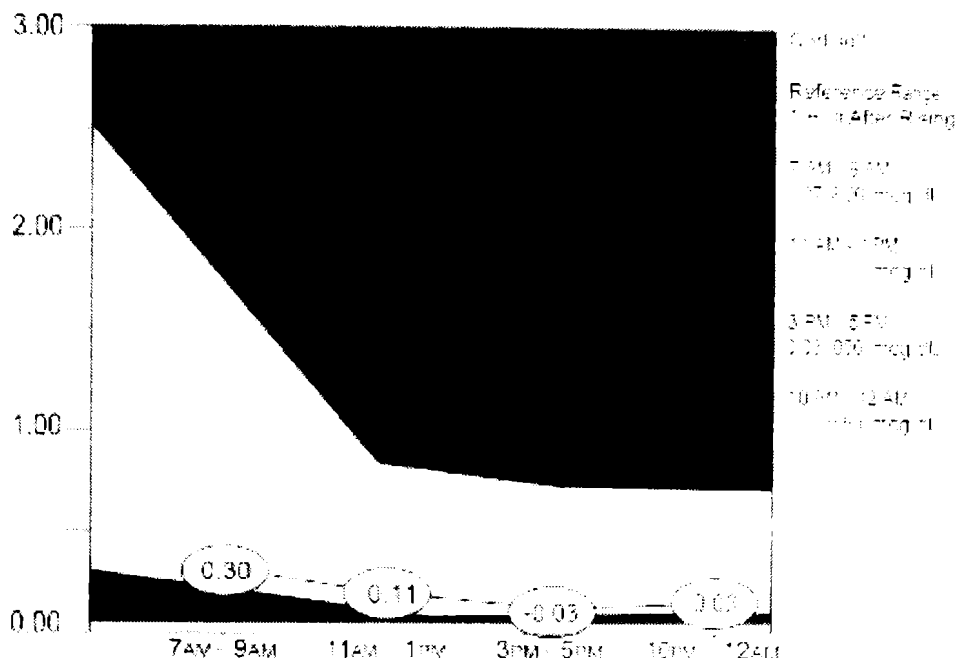
cortisol amounts fall within the normal range (actually all her cortisol points are within normal). But the DHEA is low, and if you believe in the theory proposed by Dr. Selye, Dr. Lam, Dr. Peatfield, and others, this is an indicator that the adrenals are fatigued.

\* \* \*



**Figure -44.**



**Figure -45.**

So far we have focused on the cortisol labs from Diagnos-Tech—but there are other labs that do these tests. One of the popular ones is Genova (formerly known as Great Smokies Diagnostic Labs).

My doctor had boxes from Genova in his office so when I told him I wanted to get my adrenals checked he gave me their box.

I was fairly certain that I had adrenal fatigue. I had symptoms of chronic fatigue for 21 years following a severe viral illness (Epstein Barr).

Do you see how the Genova range of “normal” cortisol is hugging the bottom of the chart? It seems to go all the way down to “zero” on the cortisol measurement. I had immeasurable cortisol at 4 pm and it doesn’t even appear out of range on the graph. My doctor had boxes from Genova in his office so when I told him I wanted to get my adrenals checked he gave me their box—it is at the edge of “normal”.

There is no mention of cortisol burden. Genova labs show the DHEA like this. Mine was a bit lower than centerline.

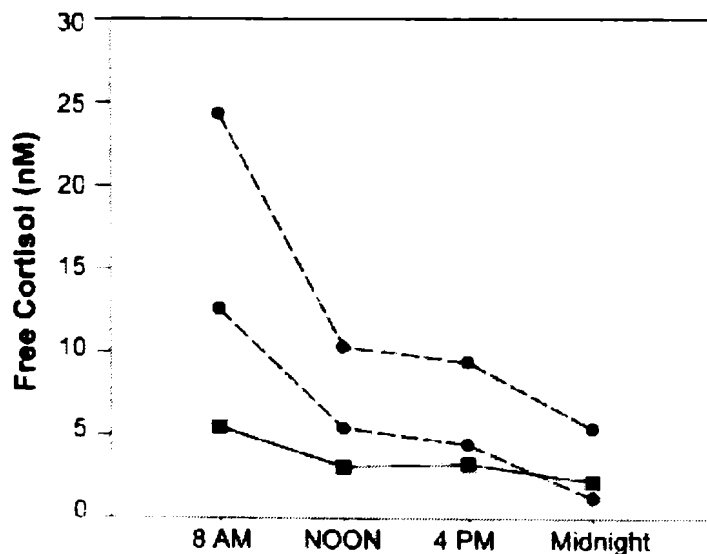
| Hormone                           | Reference Range |              |
|-----------------------------------|-----------------|--------------|
| DHEA 7am - 9am                    | 120             | 14-277 pg/mL |
| DHEA / Cortisol<br>Ratio x 10,000 | 400             | 35-435       |

**Figure -46.**

Now compare my labs, with immeasurable and barely measurable readings, to a woman's labs from DiagnosTech, below. She has definite symptoms of adrenal fatigue over many years. After this lab test, her doctor gave her a prescription for Cortef.

As you can see, her cortisol burden "11" is about half of the low end of normal (23 - 42). Her lowest readings at any point of day are "2" and we have seen some DiagnosTech examples at "1" and some that were not measurable (expressed as < meaning "less than"). The way that DiagnosTech charts the cortisol readings, it is very easy to compare with a "normal" range. When the result is low, you can evaluate HOW low.

#### **Circadian Cortisol Profile**

**Figure -47.**

**Free Cortisol Rhythm**

|                                |    |            |                    |
|--------------------------------|----|------------|--------------------|
| 07:00 - 08:00 AM               | 5  | Depressed  | 13-24 nM           |
| 11:00 - Noon                   | 2  | Depressed  | 5-10 nM            |
| 04:00 - 05:00 PM               | 2  | Depressed  | 3-8 nM             |
| 11:00 - Midnight               | 2  | Normal     | 1-4 nM             |
| Cortisol Burden:               | 11 |            | 23-42              |
| DHEA<br>Dehydroepiandrosterone | 3  | Borderline | Adults (M/F): 3-10 |

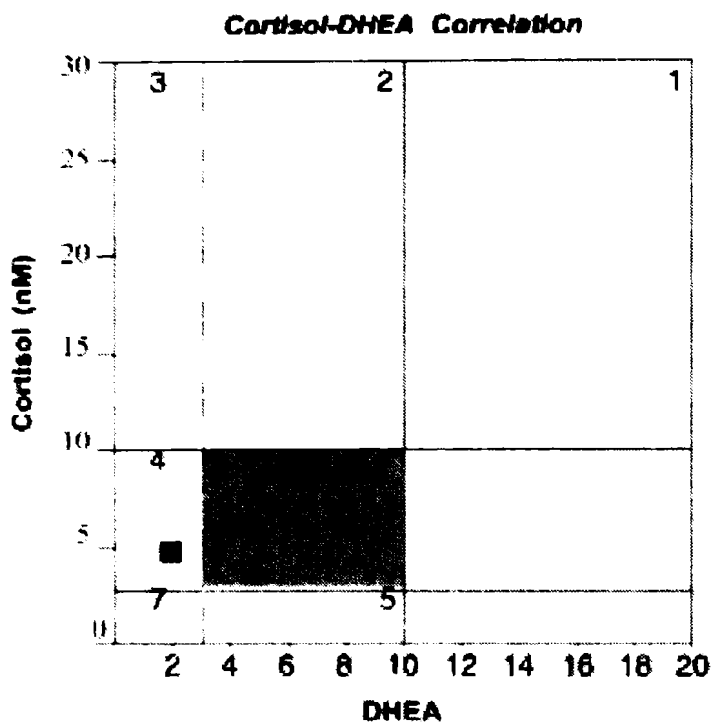
***Figure -48.***

I am of the personal opinion that the Genova lab range is overly broad, and that low levels of cortisol are hard to evaluate. I called them twice to discuss, left messages with whoever the receptionist transferred me to—and never got a call back.

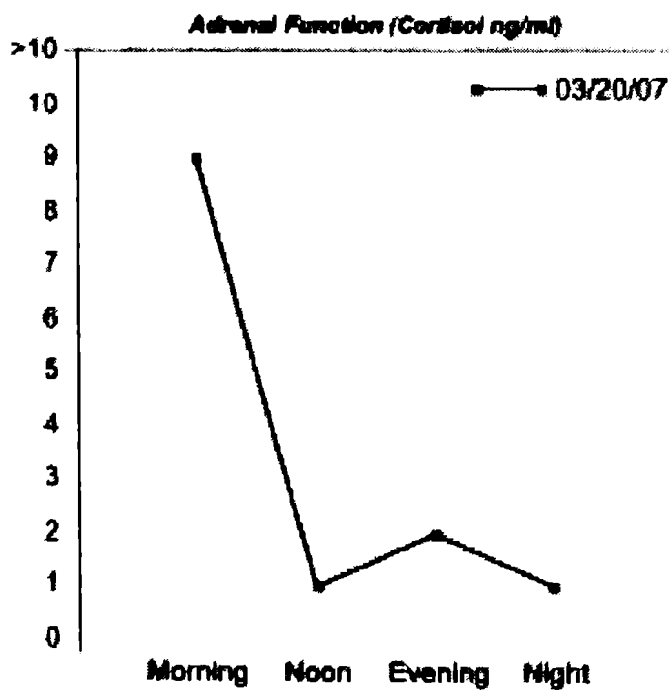
This is a Cortisol- DHEA correlation. To me, this seems more useful than Genova's DHEA/Cortisol ratio. I can see at a glance if the Cortisol is high or low. I can see if the DHEA is high or low.

The relationship of the 2 is clearly expressed.





**Figure -49.**



**Figure -50.**

Now let's look at an example from ZRT Labs

This member also gave permission to publish his chart (personal info removed) and described symptoms of adrenal fatigue. After receiving his lab result, he decided to treat his adrenals with Isocort.

| Hormone Test              | In Range | Out Of Range | Units | Range                     |
|---------------------------|----------|--------------|-------|---------------------------|
| Estradiol (saliva)        | 1.0      |              | pg/ml | 0.8-2.2                   |
| Progesterone (saliva)     | 26       |              | pg/ml | 12-100                    |
| Testosterone (saliva)     | 80       |              | pg/ml | 44-148 (Age Dependent)    |
| DHEAS (saliva)            | 8.5      |              | ng/ml | 2-23 (Age Dependent)      |
| Cortisol Morning (saliva) | 9.0      |              | ng/ml | 3.7-9.5                   |
| Cortisol Noon (saliva)    |          | 1.1L         | ng/ml | 1.2-3.0                   |
| Cortisol Evening (saliva) |          | 2.2 H        | ng/ml | 0.6-1.9                   |
| Cortisol Night (saliva)   | 0.5      |              | ng/ml | 0.4-1.0                   |
| Free T4 (blood spot)      | 2.5      |              | ng/dL | 0.7-2.5                   |
| Free T3 (blood spot)      |          | 2.1 L        | pg/ml | 2.5-6.5                   |
| TSH (blood spot)          | 1.8      |              | uU/ml | 0.5-3.0                   |
| TPO (blood spot)          |          | 2247 H       | IU/ml | 0-150 (70-150 borderline) |

*Figure -51.*

This person has an erratic rhythm—yet appears to have adequate cortisol production overall. I don't see ZRT commenting on the cortisol burden. One of the nice things about ZRT is they have the patient fill out a questionnaire and the report will comment on your symptoms as well as the measurement of cortisol.

# Addendum G

## **CONVERSION PATHWAYS from Cholesterol to your Hormones**

**CHOLESTEROL**

goes to

**PREGNENOLONE**

(with the help of thyroid hormones)

which then can go to

1) **PROGESTERONE** or 2) **DHEA**

1) **PROGESTERONE** can convert to

a) **ALDOSTERONE**, or...

b) **CORTISOL**, or...

c) **ANDROSTENEDIONE**, or...

d) **TESTOSTERONE**

2) **DHEA** will convert to **ANDROSTENEDIONE**

**ANDROSTENEDIONE**

goes to

1) **ESTROGENS** and **PROGESTERONE**

(which can also come from the Ovaries)

or to

2) **TESTOSTERONE**

(which can also come from the Testes)



# Glossary

**ACTH Stimulation (STIM):**

test which measures the level of cortisol before and after an injection of synthetic ACTH.

**Adaptogen:**

any of several herbs used to help the body deal with stress and rejuvenate the adrenal glands

**Addison's Disease:**

malfunction of the adrenal glands most commonly from an autoimmune destruction, causing an underproduction of cortisol.

**Adrenals:**

small glands which sit on top of each kidney and are chiefly responsible for our stress response, plus other important functions. They produce cortisol, adrenaline, aldosterone and DHEA, plus estrogen, progesterone, testosterone, and others.

**Adrenal Duncie:**

what patients will call their doctors when they pronounce that the only adrenal problems are Addisons and Cushings

**Adrenal Dysfunction:**

term to describe all problems with adrenals, which includes a mix of highs and lows, plus all lows. Sometimes includes low aldosterone.



**Adrenal Fatigue:**

condition of sluggish adrenal function resulting in low cortisol levels, and sometimes low aldosterone.

**Adrenal Insufficiency:**

condition of low cortisol production caused by Addison's disease, a progressive condition usually caused by an autoimmune attack.

**Aldosterone:**

steroid produced by the adrenals, regulating sodium and potassium.

**Armour:**

brand name of natural desiccated pig thyroid made by Forest Laboratories.

**Antibodies:**

blood proteins produced by your immune system in response to a problem.

**Antidepressant:**

a type of medication prescribed to treat depression.

**Antithyroglobulin:**

an antibody directed against the protein thyroglobulin, which is important for thyroid hormone production.

**Autoimmune:**

refers to an immune system going haywire, attacking its own cells and tissues, such as Celiac, Hashimotos, Diabetes Type 1, Lupus, Rheumatoid Arthritis, etc.

**B-12:**

vitamin which maintains healthy nerves and red blood cells.

**Butthead:**

how patients have internally described their doctors when the doctor pooh-poohed their continuing hypothyroid symptoms while on a T4-only med.

**Carbohydrates:**

organic compounds in foods that supply energy and include simple sugars like glucose or complex sugars like cellulose or starch.

**Calcitonin:**

hormone produced by the thyroid which helps prevent too-high levels of calcium in your serum, and in turn improves bone strength.

**CFS:**

abbreviation for Chronic Fatigue Syndrome, a condition that many feel is simply untreated or undertreated hypothyroid.

**Corticosteroid:**

class of adrenal steroid hormone which is anti-inflammatory, like cortisol.

**Cortisol:**

a corticosteroid hormone produced by the adrenals, also called the stress hormone; in healthy individuals, it's highest in the early morning, lowest at bedtime.

**Cushing's Syndrome:**

disorder of the adrenals causing over-production of cortisol.

**Cytomel (liothyronine sodium):**

brand name for synthetic T3 by Jones Pharma.

**DHEA:**

hormone secreted by the adrenal glands which is a precursor to testosterone.

**Deiodinases (or 5' deiodinases):**

Enzymes from peripheral tissues, and mostly the liver, which help conversion of T4 to T3 by taking off an iodine atom from the outer ring of T4. RT3 is made when an iodine atom is removed from inner ring.

**D.O.:**

abbreviation for Doctor of Osteopathy.

**Desiccated Thyroid:**

the term for porcine pig thyroid that has been dried and powdered, containing exactly what the human thyroid makes—T4, T3, T2, T1 and calcitonin.

**Electric Shock Therapy (EST):**

a treatment of voltage thought to decrease depression.

**Eltroxin:**

brand name of synthetic T4 (levothyroxine, thyroxine) medication.

**Endocrine glands:**

glands that secrete hormones into the blood, including the pituitary gland, pancreas, gonads, thyroid and adrenals.

**Endocrinologist:**

a doctor who specializes in the Endocrine System.

**Estrogen:**

steroid acting mainly as a female hormone, and occurs as either estradiol, estriol and estrone.

**Estrogen dominance:**

condition where the female hormone estrogen is too high as compared to progesterone levels, and unopposed.

**Euthyroidism:**

being normal in thyroid function.

**Ferritin:**

iron storage protein.

**Fibromyalgia:**

a condition characterized by widespread pain in the muscles and joints, and includes fatigue, sleep disorders, and depression.

**Florinef (fludrocortisone acetate):**

prescription corticosteroid drug with some glucocorticoid potency, but with greater mineralcorticoid potency, used for low aldosterone levels.

**Free Thyroxine Index (FTI or F7):**

tells how much T4 is present compared to the thyroxine-binding globulin; is considered an outdated lab test.

**Garbage can:**

where many thyroid patients have thrown their T4 medications after they got on desiccated thyroid and lived again.

**Glucocorticoid:**

a steroid adrenal hormone of which the most abundant is cortisol.

**Glycyrrhizic acid:**

molecule found in the licorice plant which extends the life of cortisol by inhibiting enzyme responsible for inactivating cortisol in the kidneys.

**Goiter:**

enlargement of the thyroid gland.

**Graves Disease:**

hyperthyroidism, or overactivity of the thyroid gland.

**Hashimotos Disease:**

an autoimmune attack on the thyroid gland which can result in a goiter and causes swings between hyperthyroid and hypothyroid.

**Hepatitis:**

a blood-born virus which affects the liver negatively; often caused by intravenous or nasal drug use, tattoos or unsafe sex or social practices.

**Hoodwinked:**

how thyroid patients feel when they find out that all the antidepressants, cholesterol meds and other medications may not have been needed if they had been on desiccated thyroid.

**Hydrocortisone (HC):**

synthetic cortisol medication.

**Hyperthyroidism:**

condition of excess thyroid function and hormones.

**Hypothalamus:**

small gland in the brain which sends messages to the pituitary to stimulate the adrenals and thyroid.

**Hypothyroidism:**

condition of insufficient thyroid function and hormones.

**Insulin:**

hormone from the pancreas that enables cells to take in blood sugar (glucose).

**Iodine:**

naturally-occurring element key to good health, and of which thyroid hormones are primarily composed.

**Iodine Loading Test:**

urine test used to determine if iodine levels are sufficient.

**Isocort:**

a popular over-the-counter adrenal support from plants.

**L-Thyroxine:**

another name for T4.

**Levothroid:**

brand name of synthetic T4 by Forest Laboratories.

**Levothyroxine:**

generic term for all synthetic T4-only medications.

**Levoxyl:**

brand name of a synthetic T4-only medication by King Pharmaceuticals.

**Liothyronine:**

generic term for synthetic T3-only medications.

**Lithium:**

prescription drug used to treat bipolar disorder, and which also inhibits thyroid function.

**Medrol (Methylprednisolone):**

a synthetic cortisol prescription medication used to treat inflammation and improve symptoms of certain disorders.

**Melatonin:**

a hormone which regulates our circadian rhythm to cause drowsiness.

**Metabolism:**

chemical reactions which give energy.

**Mineralcorticoid:**

class of adrenal steroid hormone which promotes sodium retention and fluid balance, like aldosterone.

**Mitral Valve Prolapse (MVP):**

a mostly benign condition of the heart resulting in a floppy mitral valve and slight regurgitation.

**Moron:**

how a thyroid patient describes his or her doctor after the doc says desiccated thyroid is outdated.

**Myxoedema:**

skin and tissue thickening and puffiness caused by hypothyroidism.

**Natural Thyroid:**

another name for desiccated thyroid.

**Naturethroid:**

a brand of natural desiccated pig thyroid by RLC Labs, formerly Western Research Labs.

**Naturopathy:**

an alternative form of medicine with a holistic approach and which may include homeopathy, herbs, acupuncture, aromatherapy, and others.

**Nimcompoop:**

what a patient called her doctor when he thought it was okay to hold her on one grain of desiccated thyroid for six weeks before raising.

**Nodule:**

a small and abnormal lump on the thyroid, mostly benign with 10% being cancerous.

**Nutri-Meds:**

brand name of non-prescription form of desiccated thyroid, bovine or porcine.

**Oroxine:**

Australian brand of synthetic T4, as is Eutroxsig.

**Osteopathy:**

medical approach that emphasizes the role of the musculoskeletal system in health or disease.



**Osteoporosis:**

a calcium-wasting bone disease making bones brittle and easily broken.

**Pale:**

the color a patient's face turns when doc says TSH is too low.

**Palpitation:**

an abnormal heartbeat; sudden extra-beat.

**Percent Saturation:**

lab test which measures serum iron divided by TIBC. If low, points to iron deficiency.

**Pituitary Gland:**

small gland in the base of the brain which sends stimulating messengers to other glands, including the thyroid and adrenals.

**Phosphatidylserine (PS):**

a nutrient of which half is in our brain cells; the supplement is soy-derived and is said to boost brain power, plus lower high cortisol levels.

**Potassium:**

an essential mineral found in many foods and chemically similar to sodium, but balances sodium levels.

**Pregnenolone:**

steroid hormone, also called the prohormone.

**Primary Adrenal Fatigue:**

sluggish adrenal function resulting in low cortisol and found as a poor function in the adrenals themselves.

**Progesterone:**

steroid hormone involved in menstruation and pregnancy.

**RAI (Radioactive Iodine):**

the use of radioactive iodine in the treatment of hyperthyroidism which slows down the activity of the thyroid. Considered unnecessary and with too many potential side effects by a growing body of thyroid patients in favor of blocking medications.

**Renin:**

protein released in response to decreased salt levels.

**Reverse T3:**

the inactive form of T3 made by T4 conversion; made when the body needs to decrease its T4.

**Stop the Thyroid Madness:**

a term coined by author and website creator Janie Bowthorpe to describe a revolution for better thyroid treatment.

**Secondary Adrenal Fatigue:**

sluggish adrenal function caused by Hypopituitary, or the failure to send the ACTH messenger to stimulate the adrenals to produce.

**Selenium:**

a trace mineral important for good health and which promotes the conversion of T4 to T3.

**Serum iron:**

the small amount of circulating iron which is bound by the protein transferrin.

**Stupidly:**

the way the TSH lab test discovers hypothyroid.

**Synthroid:**

form of synthetic T4 made by Abbott Laboratories.

**Subclinical hypothyroidism:**

the term for a mild form of hypothyroid, though it's often the diagnosis of a doctor who relies solely on a TSH lab result rather than symptoms.

**T3:**

active form of thyroid hormone, also called triiodothyronine.

**T4:**

storage form of thyroid hormone, also called thyroxine.

**T4-only:**

shortened name for a thyroxine-only medication like Synthroid, Levoxy, Eltoxin, Oroxine, etc.

**Testosterone:**

steroid hormone secreted in the testes of males and the ovaries of females.

**Testy:**

how a patient gets if one more doctor proclaims she is "nomal".

**Thyroid:**

butterfly shaped gland which has a major role in our energy levels and good health.

**Thyroid Hormone Resistance:**

syndrome of poor cellular response to thyroid hormones, causing a patient to need higher doses to get the same effect of lower doses.

**Thyroid Peroxidase (TPOab):**

enzyme that is important in the formation of the thyroid hormone.

**Thyroiditis:**

another term for Hashimotos or inflammation of the thyroid.

**Thyrotropin Releasing Hormone (TRH):**

hormone released by the Hypothalamus to send a message to the Pituitary gland.

**Thyroxine:**

name for T4, the thyroid storage hormone.

**Thyroxine-binding globulin test:**

measures the level of thyroid hormone-binding proteins.

**TIBC:**

stands for Total Iron Binding Capacity and measures the ability of the transferrin protein to do its job in carrying iron to your liver, bone marrow and spleen. Will go high when iron is low.

**Triiodothyronine:**

name for T3, the active thyroid hormone.

**TSH:**

Thyroid Stimulating Hormone, secreted by the pituitary to stimulate the thyroid.

**Unithroid:**

brand name of synthetic T4 made by Jerome Stevens Pharmaceuticals.

**Westhroid:**

brand of natural desiccated thyroid hormone by RLC Labs, Inc (formerly Western Research Labs).

**Wilson's Syndrome:**

condition of high levels of Reverse T3 and low body temperature, coined by an MD of the same name.

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# Resources

Though this Stop the Thyroid Madness book is a unique patient-to-patient book, here is additional good information to add to what you've learned here, or to underscore it. And since education is the key for important change, this section includes a compilation of just those kind of resources.

**\*\*To order any of these books for your library, go to the following page on the STTM website and click on any title:**  
<http://www.stopthethyroidmadness.com/books-on-thyroid/>

## **SUPPLEMENTAL READING:**

*Recovering With T3: My Journey with Hypothyroidism to Good Health Using the T3 Thyroid Hormone*

by Paul Robinson

UK thyroid patient Paul Robinson compiled this excellent information about the use of T3-only treatment from his own experiences as well as research. Additionally, he presents a unique way to promote healthier adrenal function with the use of T3 in the early morning hours, called the T3 Circadian Method. Dr John C. Lowe wrote the Forward.

*Your Thyroid and How to Keep it Healthy*

by Dr. Barry Durrant-Peatfield. MB BS LRCP MRCS

This is Peatfield's Second Edition of *The Great Thyroid Scandal and How to Survive It*, and it filled with excellent information about the thyroid, hypo- and hyper, iodine, female hormones and testosterone, plus adrenals.

*Safe Uses of Cortisol*

by William McK. Jefferies, M.D., F. A. C. P.

This one is for the "adrenal student" wanting to know more, and is highly recommended by Janie. It includes therapeutic recommendations and important aspects of cortisone or cortisol in patients with chronic allergies, autoimmune disorders, and

chronic fatigue. Incredible gems of information.

*Pets at Risk: From Allergies to Cancer, Remedies for an unsuspected Epidemic.*

by Alfred J. Plechner DVM & Martin Zucker

Yes, believe it or not, this veterinarian's book about pets has some gems of information about adrenals that can apply to humans. Pechner describes a problem in the endocrine and immune system, including the adrenals, that causes a lot of problems that involves treatment with pharmaceutical meds as well as diet.

*Adrenal Fatigue: The 21st-Century Stress Syndrome*

by James L. Wilson, N.D., D.C., Ph.D.

A friendly, easy-to-read book about adrenal issues which are common with hypothyroid patients. The book opens with an overview of the function of the adrenals, and how they are prone to chronic fatigue given our hyper-stressed contemporary lifestyles. It continues with information on how to tell if you have adrenal fatigue and multiple strategies for treatment.

*Why Do I Still have Thyroid Symptoms When my Lab Tests are Normal*

by Datis Kharrazian

Intended more for health professionals than patients, this book is filled with good information about Hashimoto's and the need to avoid gluten. He explains that the gliadin portion of gluten is similar to thyroid cells, and thus, the attack on gluten as well as the thyroid. Kharrazian outlines his successes in balancing the immune system.

*Your Guide to Metabolic Health*, co-authored

by Dr. Gina Honeyman, DC and Dr. John Lowe, DC.

This informative book outlines poor metabolic health, which includes low energy, aches and pains, depression, poor memory and concentration, anxiety, malaise, etc, and moves into good information on the two most common causes—untreated or under-treated hypothyroidism and thyroid hormone resistance.

Other causes include imbalances of sex and stress hormones, nutritional deficiencies, unwholesome diet, poor physical fitness, and more.

*Hormones, Health, and Happiness: A Natural Medical Formula for Rediscovering Youth*

by Steven F. Hotze, M.D.

In an 8-point program, Hotze describes a new model of healthcare, using bio-identical hormones and other natural treatments. It goes against the prevailing medical approach of treating individual symptoms with the familiar “anti” drugs—such as antibiotics, antihistamines, and antidepressants, and instead addresses the underlying causes of poor health.

*Hypothyroidism: The Unsuspected Illness*

by Broda O. Barnes, M.D. and Lawrence Galton

A classic from 1976, this easy-to-read and pioneering book explains the thyroid gland, how it works, and problems its dysfunction can induce. Includes detailed case histories of patients, often who were thought hopeless, whose problems were discovered to be related to hypothyroidism and were cured by Dr. Barnes’ simple effective techniques, included basal temperature taking and the use of desiccated thyroid.

*Hypothyroidism Type 2: The Epidemic*

by Mark Starr, M.D.

A clear and understandable explanation of why so many people today are suffering from hypothyroidism, despite “normal” blood tests. Has information on the cause and successful treatment for obesity, heart attacks, depression, diabetes, strokes, headaches, chronic fatigue, and others. In Dr. Starr’s description of Type 2 Hypothyroidism, he presents overwhelming evidence showing a majority of Americans suffer this illness, which is due to environmental and hereditary factors.

*The Great Thyroid Scandal and How To Survive It*

by Dr. Barry Durrant-Peatfield, MB, BS, LRCP, MRCS

An excellent review of thyroid disease and the treatment

alternatives using natural glandular extracts (desiccated thyroid) and adrenal support like cortisol. The book takes you step by step through the diagnosis and treatment of thyroid illnesses and reveals how poorly modern medicine understands thyroid disease.

*Overcoming Thyroid Disorders*

by Dr. David Brownstein

This book is holistically oriented in the treatment of hypothyroidism, and shows how a natural treatment program consisting of natural thyroid hormone, other natural hormones, vitamins, minerals, diet modifications and detoxification can successfully treat many conditions. It includes over 30 actual cases from his practice. A hopeful book.

*The Hormone Solution: Stay Younger Longer with Natural Hormone and Nutrition Therapies*

by Thierry Dr. Hertoghe MD

This book presents an effective program to counter memory loss, weight gain, poor muscle mass, hair loss and many other symptoms of aging. He recommends the use of natural hormones along with a healthy diet plus supplementation of certain minerals and vitamins. He outlines the 15 main and crucial hormones found in your body and how each helps restore the others.

*The Thyroid Solution: A Mind-Body Program for Beating Depression and Regaining Your Emotional and Physical Health*  
by Arem Ridha, M.D.

Examines the fundamentals of thyroid disease, including diagnosis and therapy, although the focus is on the significance of the thyroid in cognition and emotions. It explains the link between stress and thyroid imbalance; how thyroid imbalance affects your emotions, sex life, and relationships; and how to cope with the effects of this imbalance. Because thyroid problems primarily strike women, a whole section deals with women's health issues, such as infertility, miscarriage, postpartum depression, premenstrual syndrome, and menopause.

*Thyroid - Guardian of Health*

by Philip G. Young, M.D.

This overall reference book examines the impact inadequate thyroid function has on individuals and the fact that hypothyroidism is frequently missed. Include history, environmental factor, and frequent clinical presentations of hypothyroidism, blood tests and their faults. Thyroid's relationship to adrenal hormones is also discussed

*Tears Behind Closed Doors*

by Diana Holmes

This book is an examination of a serious medical problem (untreated/undertreated hypothyroidism) and is the result of the author's untiring crusade to prevent others from going through the physical and emotional hell she had to endure. It is a positive personal account that will give comfort and inspiration.

*Salt: Your Way to Health*

by David Brownstein, MD

Dr. Brownstein not only debunks the low-salt diet / lowered blood pressure myth, he gives you clear and concise reasons for adding unrefined salt to one's daily regimen. He shows you how an adequate salt intake is necessary for proper functioning of the hormonal system and the immune system and that includes proper adrenal function. In addition,

*Could It Be B12?: An Epidemic of Misdiagnoses*

by Sally M. Pacholok RN and Jeffrey J. Stuart DO

A silent crippler stalks millions of Americans and you maybe one of them... is how this excellent book starts out about the common problem of a B12 deficiency. The book describes the different manifestations of low B12; including the fact that it can mimic MS or other neurological disorders, as well as cause mental illness, learning disabilities, impaired immune function, plus more. A must read for those who suspect they have low B12.



*The Metabolic Treatment of Fibromyalgia*

by John C. Lowe

This acclaimed book is equal to a very large textbook and chock full of excellent medical information and research, revealing what a very intelligent and meticulous man Lowe was. He goes into great detail explaining the treatment, how well patients respond to a combination of T4 and T3, and even with a “normal” lab result. He mentions important dietary practices in the treatment.

**WEBSITES (in no particular order):**

*www.drplechner.com* Brilliant website about the adrenal status and treatment of animals by Dr. Alfred Plechner that could aptly be compared to humans!

*www.drrind.com* One of our favorite sites for a downloadable graph and instructions for temperature-taking—a must!

*www.drlam.com* Check out his Adrenal fatigue page—an excellent overview! He also covers the connection with adrenal fatigue and insulin resistance and estrogen dominance. Good tips on how to eat with adrenal fatigue.

*www.thyroid-rt3.com* Website about RT3 created by Nick Foote

*www.thyroidmanager.org* Updates and articles on all facets of thyroid disorders. plus where you can find the reference that the thyroid produces an equivalence of 3 - 5 grains, or 94 - 110 µg T4 and 10 - 22 µg T3 daily

*www.naturalthyroidchoices.com* Website by Stephanie, who won her battle with thyroid cancer, plus information on children and thyroid.

*www.breastcancerchoices.org/* This website shows a strong connection between the use of iodine (which also benefits your thyroid) and breast health.

[www.drLOWE.com](http://www.drLOWE.com) Website by Dr. Lowe, who has always been on target about thyroid disease and the use of desiccated thyroid. Has good information on why desiccated thyroid is good for your heart.

[www.drginahoneyman.com](http://www.drginahoneyman.com) Website of Dr. Honeyman, who heads the Center for Metabolic Health and who co-authored a Metabolic book with Lowe.

<http://altsupportthyroid.org/> Comprehensive thyroid website, which also contains a compilation of info on suppressed TSH

[www.thyroidresearch.com](http://www.thyroidresearch.com) This thorough site by Edna of the UK provides a wealth of information on articles and research related to thyroid

[www.tuberoze.com/Adrenal\\_Glands.html](http://www.tuberoze.com/Adrenal_Glands.html) Excellent overview of adrenals

[www.earthclinic.com](http://www.earthclinic.com) Very interesting website filled with natural alternative treatments as found by individuals, including apple cider vinegar and more

[www.tpa-uk.org.uk](http://www.tpa-uk.org.uk) Thyroid Patient Advocacy-UK-thyroid advocacy site working to increase awareness for proper diagnosis and appropriate treatment for this disease

[www.armourinfo.freeuk.com](http://www.armourinfo.freeuk.com) UK's Sheila Turner's website for downloadable & printable info to give to your doc

[www.convert-me.com/en/convert/length](http://www.convert-me.com/en/convert/length) If you need to convert Fahrenheit to Celsius (or know the conversion of ANY kind of measurement), I highly recommend this site

[www.thyroidscience.com](http://www.thyroidscience.com) Dr. John C. Lowe's scientific website dedicated to the truth about thyroid treatment

**PATIENT-to-PATIENT groups (not in any particular order, and for PATIENTS ONLY):**

**NOTE:** *These patients groups are NOT being recommended as a substitute for a relationship with a good doctor. They are for informational purposes only. Thus, the author and publisher of this book takes no responsibility for your decisions in using these sites—that is your responsibility, or between you and your doctor.*

**FACEBOOK GROUPS****Adrenals:**

<https://www.facebook.com/groups/STTMAdrenalsDiscussion/>

**T3-only:**

<https://www.facebook.com/groups/T3onlySTTMdiscussion/>

**Europe/Australia:**

<https://www.facebook.com/groups/STTMEuropeAustralia/>

**Gluten Issues:**

<https://www.facebook.com/groups/STTMGlutenIssues/>

**Parents of Hypo Children:**

<https://www.facebook.com/groups/ParentsofHypothyroidChildren/>

**Without a Thyroid:**

<https://www.facebook.com/groups/STTMWithoutAThyroid/>

**STTM business (for STTM announcements only):**

<https://www.facebook.com/StoptheThyroidMadness>

**OTHER GROUPS**

<http://health.groups.yahoo.com/group/NaturalThroidHormones>

This yahoo group has been in existence since 2002, and focuses on the use of desiccated thyroid and other brands. You have to request membership and be detailed on why you are asking.

<http://health.groups.yahoo.com/group/nthchildren/> A group specifically for parents or legal guardians of children with hypothyroidism. You will need to request membership.

<http://health.groups.yahoo.com/group/NaturalThyroid-HormonesEUROPE> Desiccated thyroid or T3 discussion group only for those who live in European countries.

<http://health.groups.yahoo.com/group/thyroidpatientadvocacy/> Run by thyroid patient advocate Sheila and focuses specifically on the UK.

[www.realthyroidhelp.com](http://www.realthyroidhelp.com) This is a website of forums based on being hypothyroid and related issues. You will need to register before you can post.

<http://health.groups.yahoo.com/group/iodine/> Run by a thyroid cancer patient who beat thyroid cancer, this is a group that focuses on the use of iodine for good health.

<http://health.groups.yahoo.com/group/thyroidless/> For those completely without a thyroid, whether through RAI, surgical removal or other issues, this group is run by the vivacious Sam who has regained her health and well-being with desiccated thyroid and support of her adrenals.

<http://health.groups.yahoo.com/group/atomicwomen/> A friendly group for the discussion of I-131 (RAI) as a therapy for Graves' Disease.

## **T-SHIRTS and BUMPER STICKERS to spread the word:**

[www.stopthethyroidmadness.com/t-shirt](http://www.stopthethyroidmadness.com/t-shirt) Here's where you can order thyroid advocacy t-shirts, your own spread-the-word business cards, plus many other thyroid-related items to spread the word to other patients.



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